

PHASE II ENVIRONMENTAL SITE ASSESSMENT

OF

BEKAERT STEEL 2121 LATIMER DRIVE MUSKEGON, MICHIGAN

MAY 9, 2012

**Prepared For:** 

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## TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
PHASE II ENVIRONMENTAL SITE ASSESSMENT	3
Background	3
FIELD INVESTIGATION ACTIVITIES	
LABORATORY ANALYTICAL RESULTS	8
CONCLUSIONS	16

## **APPENDICES**

APPENDIX A: Figure 1 (Location Map) and Figure 2 (Site Plan with Soil Boring Locations)

APPENDIX B: Soil Boring Logs
APPENDIX C: Laboratory Report

# PHASE II ENVIRONMENTAL SITE ASSESSMENT OF BEKAERT STEEL 2121 LATIMER DRIVE MUSKEGON, MICHIGAN

#### **EXECUTIVE SUMMARY**

Envirologic Technologies, Inc. (Envirologic) performed a Phase I Environmental Site Assessment of the property at 2121 Latimer Drive in Muskegon, Michigan. The Phase I ESA identified the following Recognized Environmental Conditions (RECs):

- A former steel-pickling line using phosphoric and hydrochloric acid.
- Wastewater treatment including areas where treatment occurred and waste sludges were temporarily stored.
- Wire-processing lines using molten lead baths and quench oils, galvanizing operations, and electroplating operations.
- Sumps, trench drains, underground piping used to convey wastewater from processing areas to the wastewater treatment area.
- Chemical storage and use including lead, zinc, oils, acids, and degreasers. This includes
  two aboveground storage tanks containing hydrochloric acid on the southern building
  exterior, material storage on the west side of the building, a bulk oil delivery area on the
  west side of the building, and the potential for lead fallout from roof ventilation systems.

To determine if these RECs had impacted the property, Envirologic implemented a Phase II ESA. The Phase II ESA included the advancement of 40 soil borings at specific locations associated with the RECs. Soil and groundwater samples were collected from various locations across the site to assess the potential for impact of the site. Generally there were no field observations such as staining and odors to indicate potential impact. At one location beneath the original building, a petroleum odor was observed at the water table. A groundwater sample collected from this boring did not indicate any impact.

Groundwater samples were collected from the western and southern sides of the building. At one location, dissolved zinc levels were observed above the groundwater-surface water interface criterion and at the drinking water criterion. The pH of the groundwater at this location was also

significantly lower than other groundwater samples collected on site. The data suggests a localized area where acid use on the site may have impacted groundwater causing dissociation of metals from soil. It is not clear that the sampled location represents the highest levels of impact within this localized area. Based on the limited data, the site does meet the definition of a "facility" as defined in Part 201 of the Natural Resources and Environmental Protection Act (NREPA) based on the presence of zinc in groundwater in excess of the groundwater-surface water interface (GSI) criterion. Additional assessment could be completed to demonstrate the limited nature of this observation and perhaps demonstrate that the GSI pathway is not relevant.

#### PHASE II ENVIRONMENTAL SITE ASSESSMENT

# OF FORMER BEKAERT STEEL SITE 2121 LATIMER DRIVE MUSKEGON, MICHIGAN

#### **Background**

Envirologic Technologies, Inc. (Envirologic) performed a Phase I Environmental Site Assessment of the property at 2121 Latimer Drive in Muskegon, Michigan. Historic data sources indicate that a 40,000-square-foot building was originally constructed in 1974. This original building is the northwest corner of the current building. An addition was constructed in 1979, expanding the building to the south. Two large additions to the east were constructed by 1991, bringing the building to its current size (199,785 square feet) and configuration.

The site was originally utilized by Muskegon Wire Corporation and later, Peterson Spring – a successor to Muskegon Wire. In December 1986, the site was acquired by Bekaert Steel Wire Corporation who continued to operate the site as a wire manufacturer. Operations included wire drawing lines with baths of quench oil and molten lead, a plating operation in the easternmost building, a steel pickling operation in the southern portion of the building, a wastewater treatment plant, and a series of subgrade sumps, trenches and piping that was used to convey wastewaters, dilute acid, etc. to the wastewater treatment area.

The Phase I ESA identified the following Recognized Environmental Conditions:

- A former steel-pickling line using phosphoric and hydrochloric acid.
- Wastewater treatment including areas where treatment occurred and waste sludges were temporarily stored.
- Wire-processing lines using molten lead baths and quench oils, galvanizing operations, and electroplating operations.
- Sumps, trench drains, underground piping used to convey wastewater from processing areas to the wastewater treatment area.
- Chemical storage and use including lead, zinc, oils, acids, and degreasers. This includes
  two aboveground storage tanks containing hydrochloric acid on the southern building
  exterior, material storage on the west side of the building, a bulk oil delivery area on the
  west side of the building, and the potential for lead fallout from roof ventilation systems.

To determine if these REC s had impacted the property, Envirologic implemented a Phase II ESA. The Phase II ESA included the advancement of 40 soil borings at specific locations associated with the recognized environmental conditions.

## **Field Investigation Activities**

Envirologic completed GeoProbe<sup>™</sup> soil boring installation activities on April 4-6, 2012. A total of 40 GeoProbe<sup>™</sup> soil borings were installed at the site. The locations and rationale for the boring location and placement is detailed in Table 1. Refer to Figure 2 in Appendix A for soil boring locations.

Soil Boring Designation	Location Rationale
GSB-1	Placed in original building near oil-tempering line depicted in historical site
	plans
GSB-2	Placed in original building near quench oil tank location depicted in historical
	site plans
GSB-3	Placed in original building near molten lead tank location depicted in historical
	site plans
GSB-4	Placed in original building next to patched concrete area
GSB-5	Placed in original building near patenting line depicted in historical site plans
GSB-6	Placed in original building in the patenting line area; specifically, in an area
	where tank foundations are visible
GSB-7	Placed next to a sealed sump in the second addition
GSB-8	Placed in second addition on oil-tempering line location
GSB-9	Placed inside western wall in area where oil was stored
GSB-10	Next to a sump used to collect wastewater. Also in an area where a molten
	lead tank was depicted on historic site plans
GSB-11	Placed in second addition near oil-tempering line depicted on historic site
	plans
GSB-12	Placed near patenting line in second addition
GSB-13	Placed in second addition near patched concrete area for galvanizing line
GSB-14	Placed in second addition near oil-tempering line depicted on historic site
	plans
GSB-15	Placed in wastewater treatment plant area near former lime and sodium
	hydroxide tank locations
GSB-16	Placed in area where roll-off containers were placed to collect wastewater
	treatment sludge from filter press
GSB-17 and GSB-18	Placed in unpaved areas west of the building to assess potential fallout from
	lead emissions

GSB-19	Placed adjacent to concrete pad for wet scrubber system
GSB-20	Placed in unpaved area south of building near former wet scrubber system
GSB-21	Located south of the truck bay and former hydrochloric acid tanks
GSB-22	Placed in a former general storage area on the south side of the building
GSB-23	Placed outside the building to the west of the wastewater treatment sludge
	roll-off container area
GSB-24	Outside the building to the west in an area depicted on historic site plans as a
	storage area for miscellaneous scrap steel
GSB-25	Alongside western exterior wall in area where oil was delivered to interior
	tanks
GSB-26	At western exterior location where a former bulk oil tank was depicted on
	aerial photographs
GSB-27, 28 and 29	In the pickling line area
GSB-30	Located in a storage area used to store roll-off containers full of wastewater
	treatment sludge
GSB-31, 32 and 33	Located in the easternmost addition in or next to a large concrete patched
	area depicted on historic site plans as an electroplating line
GSB-34	Located in the central addition next to a long subgrade trench
GSB-35, 36, 37, 38, and 40	Located in the central addition – depicted as a former wire drawing line.
	Borings placed next to floor drains covered or sealed trenches.
GSB-39	Placed adjacent to a sump in the central addition

Most of the soil borings were extended to a depth of 13 to 15 feet below grade level (bgl). Immediately beneath the concrete slab soil consisted of a fine to medium-grained brown sand, presumably imported sand to level the site for construction. Beneath this sand was a fine to medium brown sand intermixed with varying levels of gravel. At depths of 9.5 to 10 feet bgl, the soil was observed to be damp with water. Groundwater was typically encountered at a depth of 10 to 11 feet below grade. Soil boring logs are provided in Appendix B.

During advancement of the soil borings, samples were continuously collected and field screened using a Photo Ionization Detector (PID) to screen soil for evidence of volatile organic compounds (VOCs). Generally, there was no evidence observed during placement of the soil borings. At GSB-2, an odor was observed at the water table, and based on that observation, the soil boring was converted into a temporary groundwater monitoring well to assess groundwater. At GSB-9, next to the oil storage area, a darker brown sand layer was observed that was only observed at this location. Still no odors or PID readings were observed in the material. The soil sample from this boring was collected from 2.5 feet bgl within this darker layer. There were no PID readings

and no evidence of staining, fill material, odors or other evidence of potential impact observed in any of the other soil borings at any depth.

To assess the potential impact, soil samples were collected for laboratory analysis from each soil boring. Soil samples were generally taken from the interval of 2.5 to three feet bgl. This sampling depth was selected to coincide with the expected base of trench systems, sumps, piping, etc. that appeared to be located beneath the slab. At soil borings GSB 17 and 18, soil samples were collected from 0.5 to one foot below the surface. These borings were located outside on the eastern side of the building in an unpaved area. These soil samples were intended to evaluate the potential for lead fallout from emissions at the site and thus, shallow soil samples were appropriately collected.

Soil sampling for VOCs was completed using EPA Method 5035 protocols. All subsurface sampling equipment was cleaned with a phosphate-free detergent wash, followed by a freshwater rinse and a deionized water rinse prior to and between each boring in order to prevent cross-contamination. All boring locations were backfilled with native soil.

Samples were placed on ice and submitted to Trace Analytical Laboratories under chain of custody procedures. The soil samples were analyzed for polynuclear aromatic hydrocarbons (PNAs) and Michigan 10 metals. These analyses were selected based on the historical documents which indicated significant use of quench oils, lubricating oils, and heavy metals.

While the historical documentation did not indicate significant use of solvents at the site, select samples were also analyzed for VOCs (method 8260+). As there were no PID readings or other evidence of VOC impact observed in the field, locations where soil samples were analyzed for VOCs were strategically spread across various functional areas of the facility including the original building (GSB-5), areas where bulk oil was used (GSB-9, GSB-25 and GSB-26), the wastewater treatment area (GSB-15), the pickling line (GSB-29), the wire drawing line (GSB-34 and GSB-40), the former plating line (GSB-32), and the southern exterior area of the building (GSB-21).

Six of the soil borings were converted into temporary groundwater monitoring well locations. Monitoring well locations included GSB-2 where evidence of petroleum odors was observed at the water table. Additionally, temporary monitoring wells were placed in the four exterior groundwater monitoring well locations on the west side of the building. This was based on a presumption that groundwater flow in the area would be in a predominant westerly direction.

The soil boring on the south side of the building (GSB-21) was also converted into a temporary groundwater monitoring well.

Groundwater samples were collected from one-inch temporary groundwater monitoring wells constructed of PVC with 10 slot screens with a five-foot screened interval set to straddle the water table. Water was purged using a peristaltic device until pH, temperature, and specific conductivity levels were consistent and stable. Water samples were then obtained for laboratory analysis. Due to observed visible turbidity, samples collected for metals analyses were field filtered.

#### LABORATORY ANALYTICAL RESULTS

The collected soil samples were submitted to Trace Analytical Laboratories of Muskegon, Michigan for laboratory analysis. The laboratory analytical reports and a copy of the chain of custody are presented in Appendix C.

No VOCs or PNAs were detected in any of the submitted soil samples. Metals were detected but at concentrations less than the Statewide Default Background Criteria and/or the Residential Drinking Water Protection Criteria.

No VOCs or PNAs were detected in any of the groundwater samples. Dissolved copper, silver and zinc were present in certain groundwater samples but at concentrations less than residential drinking water cleanup criteria. Zinc was noted in the sample at GSB-23 at a concentration of 2,400 ug/L, which is the residential drinking water criterion for zinc. Envirologic noted that during collection of this groundwater sample, the pH ranged from 5.64 to 5.83, consistently lower than other groundwater samples collected at the site (usually 6.8 to 7.2). The location of this sample was just west of the wastewater treatment areas. This process was presumably being used to neutralize the spent hydrochloric acid pickling liquor among other aqueous wastes. As such, it is possible that acids were released in this vicinity resulting in a lowering of the groundwater pH and possibly disassociating metals from soil into groundwater. Envirologic subsequently had the groundwater sample analyzed for dissolved manganese and iron, which, based on their natural prevalence, would be expected to be present in groundwater had such a release occurred. Dissolved manganese was not detected in the sample and dissolved iron as below the health-based residential drinking water criterion. If there had been a direct release of spent pickling liquor at this location one would have expected iron levels to be significantly higher.

It should also be noted that a soil sample collected at a depth of four feet did not contain metals concentrations that were significantly greater than observed elsewhere on site. The data seems to indicate a localized area at the property where a moderate increase in zinc levels compared to other areas on the site may be observed. The zinc result does exceed the groundwater-surface water interface criteria (assuming a hardness of the receiving water of 400 mg/L CaCO<sub>3</sub>). The nearest water body is 0.20 miles south of the site, and based on this proximity the groundwater-surface water interface pathway is deemed relevant. There are no conveyances such as storm drains which would directly convey groundwater to the southern water body and further evaluation could be completed to assess the applicability of this exposure pathway to the site.

Based on the limited data, the site does meet the definition of a "facility" as defined in Part 201 of the Natural Resources and Environmental Protection Act (NREPA) based on the presence of zinc in groundwater in excess of the groundwater surface water interface criterion.

A summary of the soil and groundwater analytical results along with a comparison to Residential cleanup criteria are presented as Tables 1 and 2, respectively.

Table 1. Soil Analytical Results

			Gr	oundwater Protect	ion	Indoor Air	Ambier	nt Air (Y)	Direc	t Contact									
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Volatile Soil	I Particiliate Soli	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	GSB-1 @3'	GSB-2 @ 3'	GSB-3 @3'	GSB-4@3'	GSB-5 @3'	GSB-6 @ 3'	GSB-7 @3'	GSB-8 @ 3'	GSB-9 @ 2.5'
Barium	7440393	75,000	1.30E+06	1.2E+06	1.0E+9 (D)	NLV	NLV	3.30E+08	3.70E+07	NA	8400	7000	4200	4000	11,000	1500	4300	5600	14,000
Cadmium	7440439	1,200	6,000	3000	2.30E+08	NLV	NLV	1.70E+06	5.50E+05	NA	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
Chromium (III)	16065831	18,000 (total)	30,000	3.50E+09	1.0E+9 (D)	NLV	NLV	3.30E+08	7.90E+08	NA	3200	2300	< 2000	< 2000	3400	< 2000	< 2000	2100	3200
Copper	7440508	32,000	5.80E+06	1.70E+05	1.0E+9 (D)	NLV	NLV	1.30E+08	2.00E+07	NA	1200	< 1000	1900	3200	< 1000	< 1000	1100	1000	2100
Lead	7439921	21,000	7.00E+05	2.50E+06	ID	NLV	NLV	1.00E+08	4.00E+05	NA	1500	1500	7500	14,000	2000	4000	1900	1700	7500
Zinc	7440666	47,000	2.40E+06	3.80E+05	1.0E+9 (D)	NLV	NLV	ID	1.70E+08	NA	5400	5000	7400	11,000	12,000	< 1000	3900	4400	11,000
Arsenic	7440382	5,800	4,600	4,600	2.00E+06	NLV	NLV	7.20E+05	7,600	NA	1900	550	390	460	750	140	400	430	840
Selenium	7782492	410	4,000	400	7.80E+07	NLV	NLV	1.30E+08	2.60E+06	NA	< 380	< 380	< 390	<400	< 380	< 390	< 380	< 390	< 390
Silver	7440224	1,000	4,500	100 (M); 27	2.00E+08	NLV	NLV	6.70E+06	2.50E+06	NA	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Mercury (Total)	Varies	130	1,700	50 (M); 1.2	47,000	48,000	52,000	2.00E+07	1.60E+05	NA	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
All VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	NA	NA	NA	NA	< RL	NA	NA	NA	< RL
All PNAs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL

D = calculated criterion exceeds 100%

ID = Insufficient Data to calculate criterion

NLV = Not likely to volatilize

NA = Not Applicable or Not Analyzed

RL = Reporting Limit

Table 1. Soil Analytical Results

			Gr	oundwater Protect	ion	Indoor Air	Ambier	nt Air (Y)	Direct	Contact									
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Volatile Soil		Criteria &	Soil Saturation Concentration Screening Levels	GSB-10 @ 3'	GSB-11 @ 3'	GSB-12 @3'	GSB-13 @3'	GSB-14 @3'	GSB-15 @ 3'	GSB-16 @3'	GSB-17 @ 1'	GSB-18 @ 1'
Barium	7440393	75,000	1.30E+06	1.2E+06	1.0E+9 (D)	NLV	NLV	3.30E+08	3.70E+07	NA	5000	7900	6500	9200	6200	12,000	2200	NA	NA
Cadmium	7440439	1,200	6,000	3000	2.30E+08	NLV	NLV	1.70E+06	5.50E+05	NA	< 200	< 200	< 200	< 200	< 200	< 200	< 200	NA	NA
Chromium (III)	16065831	18,000 (total)	30,000	3.50E+09	1.0E+9 (D)	NLV	NLV	3.30E+08	7.90E+08	NA	2100	< 2000	3200	3400	3100	3200	2100	NA	NA
Copper	7440508	32,000	5.80E+06	1.70E+05	1.0E+9 (D)	NLV	NLV	1.30E+08	2.00E+07	NA	< 1000	< 1000	1300	2500	1500	1800	< 1000	NA	NA
Lead	7439921	21,000	7.00E+05	2.50E+06	ID	NLV	NLV	1.00E+08	4.00E+05	NA	< 1000	4500	2500	12,000	7700	4800	< 1000	< 1000	< 1000
Zinc	7440666	47,000	2.40E+06	3.80E+05	1.0E+9 (D)	NLV	NLV	ID	1.70E+08	NA	3500	5200	8100	12,000	7100	14,000	2300	3100	2000
Arsenic	7440382	5,800	4,600	4,600	2.00E+06	NLV	NLV	7.20E+05	7,600	NA	390	490	430	1000	610	730	350	NA	NA
Selenium	7782492	410	4,000	400	7.80E+07	NLV	NLV	1.30E+08	2.60E+06	NA	< 390	< 380	< 390	< 380	< 390	< 380	< 370	NA	NA
Silver	7440224	1,000	4,500	100 (M); 27	2.00E+08	NLV	NLV	6.70E+06	2.50E+06	NA	< 100	< 100	< 100	< 100	< 100	< 100	< 100	NA	NA
Mercury (Total)	Varies	130	1,700	50 (M); 1.2	47,000	48,000	52,000	2.00E+07	1.60E+05	NA	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA
All VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	NA	NA	NA	NA	NA	< RL	NA	NA	NA
Ali PNAs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	< RL	< RL	< RL	< RL	< RL	< RL	< RL	NA	NA

D = calculated criterion exceeds 100%

ID = Insufficient Data to calculate criterion

NLV = Not likely to volatilize

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Table 1. Soil Analytical Results

			Gr	oundwater Protect	ion	Indoor Air	Ambier	nt Air (Y)	Direc	t Contact									
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Volatile Soil	I Particiliate Soli	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	GSB-19 @ 3'	GSB-20 @ 2.5'	GSB-21 @ 3'	GSB-22 @ 3'	GSB-23 @4'	GSB-24 @ 3'	GSB-25 @ 3'	GSB-26 @ 3'	GSB-27 @ 3'
Barium	7440393	75,000	1.30E+06	1.2E+06	1.0E+9 (D)	NLV	NLV	3.30E+08	3.70E+07	NA	3600	21,000	13,000	3300	1100	14,000	8900	13,000	12,000
Cadmium	7440439	1,200	6,000	3000	2.30E+08	NLV	NLV	1.70E+06	5.50E+05	NA	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
Chromium (III)	16065831	18,000 (total)	30,000	3.50E+09	1.0E+9 (D)	NLV	NLV	3.30E+08	7.90E+08	NA	< 2000	4400	3200	2100	< 2000	6700	2700	3600	3300
Copper	7440508	32,000	5.80E+06	1.70E+05	1.0E+9 (D)	NLV	NLV	1.30E+08	2.00E+07	NA	< 1000	4900	1200	1100	< 1000	1200	1500	1400	1600
Lead	7439921	21,000	7.00E+05	2.50E+06	ID	NLV	NLV	1.00E+08	4.00E+05	NA	1000	8300	1200	< 1000	< 1000	1600	2400	1200	1100
Zinc	7440666	47,000	2.40E+06	3.80E+05	1.0E+9 (D)	NLV	NLV	ID	1.70E+08	NA	2400	12,000	7700	2100	2200	9700	8800	6800	10,000
Arsenic	7440382	5,800	4,600	4,600	2.00E+06	NLV	NLV	7.20E+05	7,600	NA	200	880	690	370	210	780	490	650	680
Selenium	7782492	410	4,000	400	7.80E+07	NLV	NLV	1.30E+08	2.60E+06	NA	< 390	< 370	< 390	< 380	< 380	< 380	< 380	< 370	< 380
Silver	7440224	1,000	4,500	100 (M); 27	2.00E+08	NLV	NLV	6.70E+06	2.50E+06	NA	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Mercury (Total)	Varies	130	1,700	50 (M); 1.2	47,000	48,000	52,000	2.00E+07	1.60E+05	NA	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
All VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	NA	NA	< RL	NA	NA	NA	< RL	< RL	NA
All PNAs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL

D = calculated criterion exceeds 100%

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Table 1. Soil Analytical Results

			Gr	oundwater Protect	ion	Indoor Air	Ambier	nt Air (Y)	Direc	t Contact									
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Volatile Soil	I Particiliate Soli	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	GSB-28 @ 3'	GSB-29 @ 3'	GSB-30@ 3'	GSB-31 @ 3'	GSB-32 @ 3'	GSB-33 @ 3'	GSB-34 @ 3'	GSB-35 @ 3'	GSB-36 @ 3'
Barium	7440393	75,000	1.30E+06	1.2E+06	1.0E+9 (D)	NLV	NLV	3.30E+08	3.70E+07	NA	8200	7500	32,000	16,000	14,000	13,000	9200	7200	13,000
Cadmium	7440439	1,200	6,000	3000	2.30E+08	NLV	NLV	1.70E+06	5.50E+05	NA	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
Chromium (III)	16065831	18,000 (total)	30,000	3.50E+09	1.0E+9 (D)	NLV	NLV	3.30E+08	7.90E+08	NA	2300	4200	4300	2700	3100	4800	2500	2700	2400
Copper	7440508	32,000	5.80E+06	1.70E+05	1.0E+9 (D)	NLV	NLV	1.30E+08	2.00E+07	NA	< 1000	1800	1400	1000	1400	< 1000	1400	< 1000	1300
Lead	7439921	21,000	7.00E+05	2.50E+06	ID	NLV	NLV	1.00E+08	4.00E+05	NA	2200	1400	1600	1200	6100	1400	4100	1200	4900
Zinc	7440666	47,000	2.40E+06	3.80E+05	1.0E+9 (D)	NLV	NLV	ID	1.70E+08	NA	19,000	6700	12,000	8000	9200	7300	7900	3600	7900
Arsenic	7440382	5,800	4,600	4,600	2.00E+06	NLV	NLV	7.20E+05	7,600	NA	620	660	890	680	940	730	610	570	780
Selenium	7782492	410	4,000	400	7.80E+07	NLV	NLV	1.30E+08	2.60E+06	NA	< 380	< 380	< 370	< 380	< 390	< 380	< 380	< 370	< 380
Silver	7440224	1,000	4,500	100 (M); 27	2.00E+08	NLV	NLV	6.70E+06	2.50E+06	NA	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Mercury (Total)	Varies	130	1,700	50 (M); 1.2	47,000	48,000	52,000	2.00E+07	1.60E+05	NA	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
All VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	NA	< RL	NA	NA	< RL	NA	< RL	NA	NA
Ali PNAs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL

D = calculated criterion exceeds 100%

ID = Insufficient Data to calculate criterion

NLV = Not likely to volatilize

NA = Not Applicable or Not Analyzed

RL = Reporting Limit

Table 1. Soil Analytical Results

			Gro	oundwater Protecti	ion	Indoor Air	Ambier	nt Air (Y)	Direct	Contact				
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs		Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	GSB-37 @ 3'	GSB-38 @ 3'	GSB-39 @ 3'	GSB-40 @ 3'
Barium	7440393	75,000	1.30E+06	1.2E+06	1.0E+9 (D)	NLV	NLV	3.30E+08	3.70E+07	NA	3600	5600	5700	16,000
Cadmium	7440439	1,200	6,000	3000	2.30E+08	NLV	NLV	1.70E+06	5.50E+05	NA	< 200	< 200	< 200	< 200
Chromium (III)	16065831	18,000 (total)	30,000	3.50E+09	1.0E+9 (D)	NLV	NLV	3.30E+08	7.90E+08	NA	< 2000	2400	2200	8300
Copper	7440508	32,000	5.80E+06	1.70E+05	1.0E+9 (D)	NLV	NLV	1.30E+08	2.00E+07	NA	< 1000	< 1000	< 1000	5600
Lead	7439921	21,000	7.00E+05	2.50E+06	ID	NLV	NLV	1.00E+08	4.00E+05	NA	1500	51,000	3600	8500
Zinc	7440666	47,000	2.40E+06	3.80E+05	1.0E+9 (D)	NLV	NLV	ID	1.70E+08	NA	2600	46,000	5300	18,000
Arsenic	7440382	5,800	4,600	4,600	2.00E+06	NLV	NLV	7.20E+05	7,600	NA	360	500	490	1600
Selenium	7782492	410	4,000	400	7.80E+07	NLV	NLV	1.30E+08	2.60E+06	NA	< 400	< 400	< 380	< 380
Silver	7440224	1,000	4,500	100 (M); 27	2.00E+08	NLV	NLV	6.70E+06	2.50E+06	NA	< 100	< 100	< 100	110
Mercury (Total)	Varies	130	1,700	50 (M); 1.2	47,000	48,000	52,000	2.00E+07	1.60E+05	NA	< 50	< 50	< 50	< 50
All VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	NA	NA	NA	< RL
Ali PNAs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	< RL	< RL	< RL	< RL

D = calculated criterion exceeds 100%

ID = Insufficient Data to calculate criterion

NLV = Not likely to volatilize

NA = Not Applicable or Not Analyzed

RL = Reporting Limit

Table 2. Groundwater Analytical Results

Hazardous Substance	Chemical Abstract Service Number		Non-residential Drinking Water Criteria & RBSLs		Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Critoria &	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	GSB-21 10-15'	GSB-23 10-15'	GSB-24 10-15'	GSB-25 10-15'	GSB-26 10-15'	GSB-2 10-15'
Copper (B)	7440508	1,000 (E)	1,000 (E)	29	NLV	NLV	7.40E+06	ID	ID	< 4	7.9	< 4	< 4	< 4	< 4
Silver (B)	7440224	34	98	0.2 (M); 0.06	NLV	NLV	1.50E+06	ID	ID	0.41	< 0.2	0.21	< 0.2	< 0.2	< 0.2
Zinc (B)	7440666	2,400	5,000 (E)	380	NLV	NLV	1.10E+08	ID	ID	< 150	2400	< 150	< 150	< 150	< 150
Iron (B)	7439896	300 (E)	300 (E)	NA	NLV	NLV	5.80E+07	ID	ID	NA	1100	NA	NA	NA	NA
Manganese (B)	7439965	50 (E)	50 (E)	(G,X)	NLV	NLV	9.10E+06	ID	ID	NA	< 50	NA	NA	NA	NA
All other metals	varies	varies	varies	varies	varies	varies	varies	varies	varies	< RL	< RL				
All VOCs	varies	varies	varies	varies	varies	varies	varies	varies	varies	< RL	< RL				
All PNAs	varies	varies	varies	varies	varies	varies	varies	varies	varies	< RL	< RL				

E = Cleanup criterion is the aesthetic drinking water value

Residential Health Based drinking water criterion for iron is 2000 ug/L

NLV = Not Likely to Volatilize

ID = Insufficient Data to calculate criterion

RL = Reporting Limit

NA = Not Analyzed

#### CONCLUSIONS

Envirologic Technologies, Inc. performed a Phase I Environmental Site Assessment of the property at 2121 Latimer Drive in Muskegon, Michigan. The Phase I ESA identified the following Recognized Environmental Conditions (RECs):

- A former steel-pickling line using phosphoric and hydrochloric acid.
- Wastewater treatment including areas where treatment occurred and waste sludges were temporarily stored.
- Wire-processing lines using molten lead baths and quench oils, galvanizing operations, and electroplating operations.
- Sumps, trench drains, underground piping used to convey wastewater from processing areas to the wastewater treatment area.
- Chemical storage and use including lead, zinc, oils, acids, and degreasers. This includes
  two aboveground storage tanks containing hydrochloric acid on the southern building
  exterior, material storage on the west side of the building, a bulk oil delivery area on the
  west side of the building, and the potential for lead fallout from roof ventilation systems.

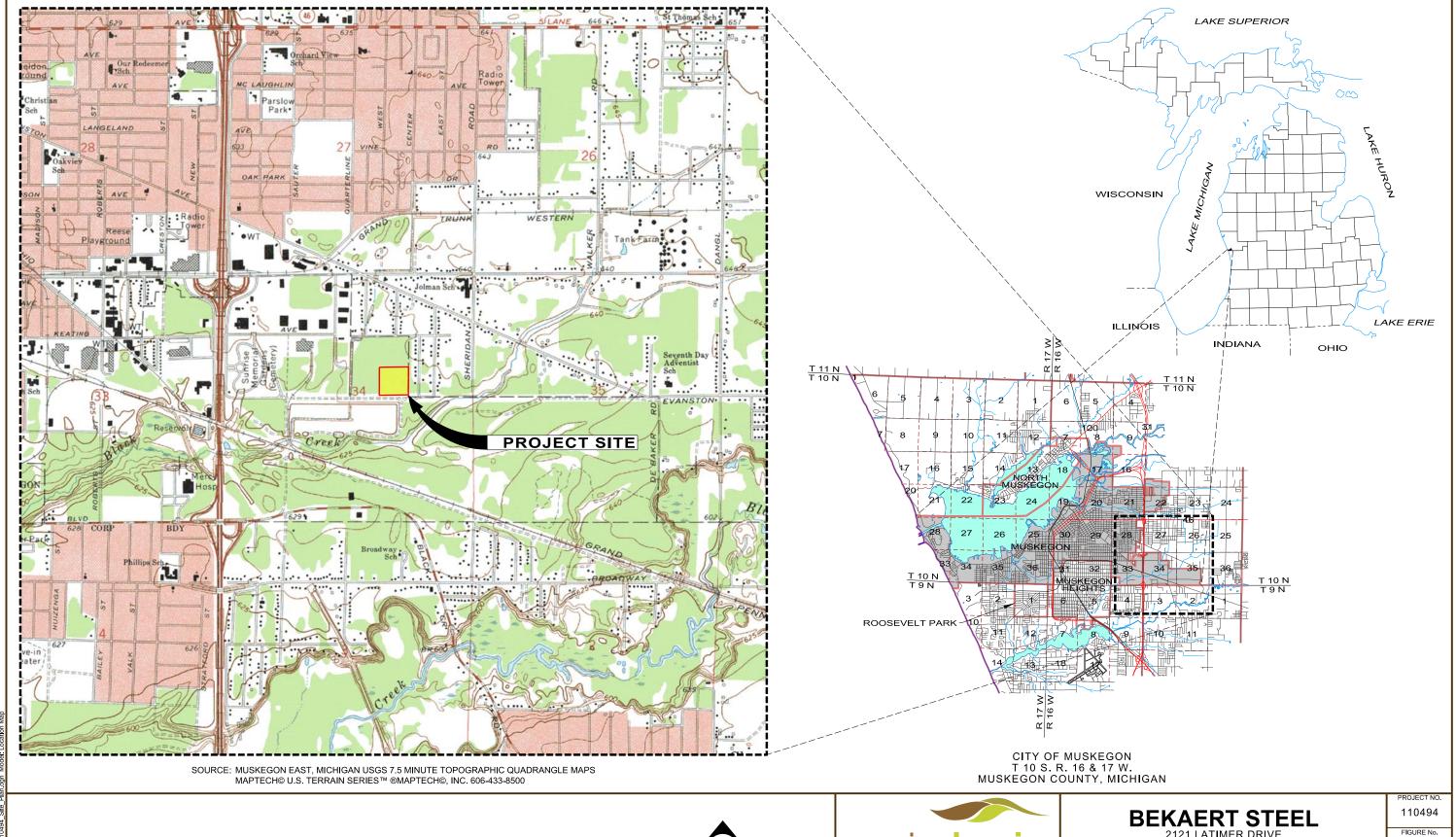
To determine if these REC s had impacted the property, Envirologic implemented a Phase II ESA. The Phase II ESA included the advancement of 40 soil borings at specific locations associated with the recognized environmental conditions. Soil and groundwater samples were collected from various locations across the site to assess the potential for impact of the site. Generally there were no field observations such as staining and odors to indicate potential impact. At one location beneath the original building, a petroleum odor was observed at the water table. A groundwater sample collected from this boring did not indicate any impact.

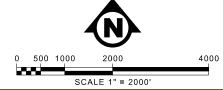
Groundwater samples were collected from the western and southern sides of the building. At one location, dissolved zinc levels were observed above the groundwater surface water interface criterion and at the drinking water criterion. The pH of the groundwater at this location was also significantly lower than other groundwater samples collected on site. The data suggests a localized area where acid use on the site may have impacted groundwater causing dissociation of metals from soil. Based on the limited data, the site does meet the definition of a "facility" as defined in Part 201 of NREPA based on the presence of zinc in groundwater in excess of the groundwater-surface water interface criterion. Additional assessment could be completed to demonstrate the limited nature of this observation and perhaps demonstrate that the GSI pathway is not relevant.

## **APPENDIX A**

# **FIGURES**

Figure 1: Location Map
Figure 2: Site Plan with Existing Boring Locations

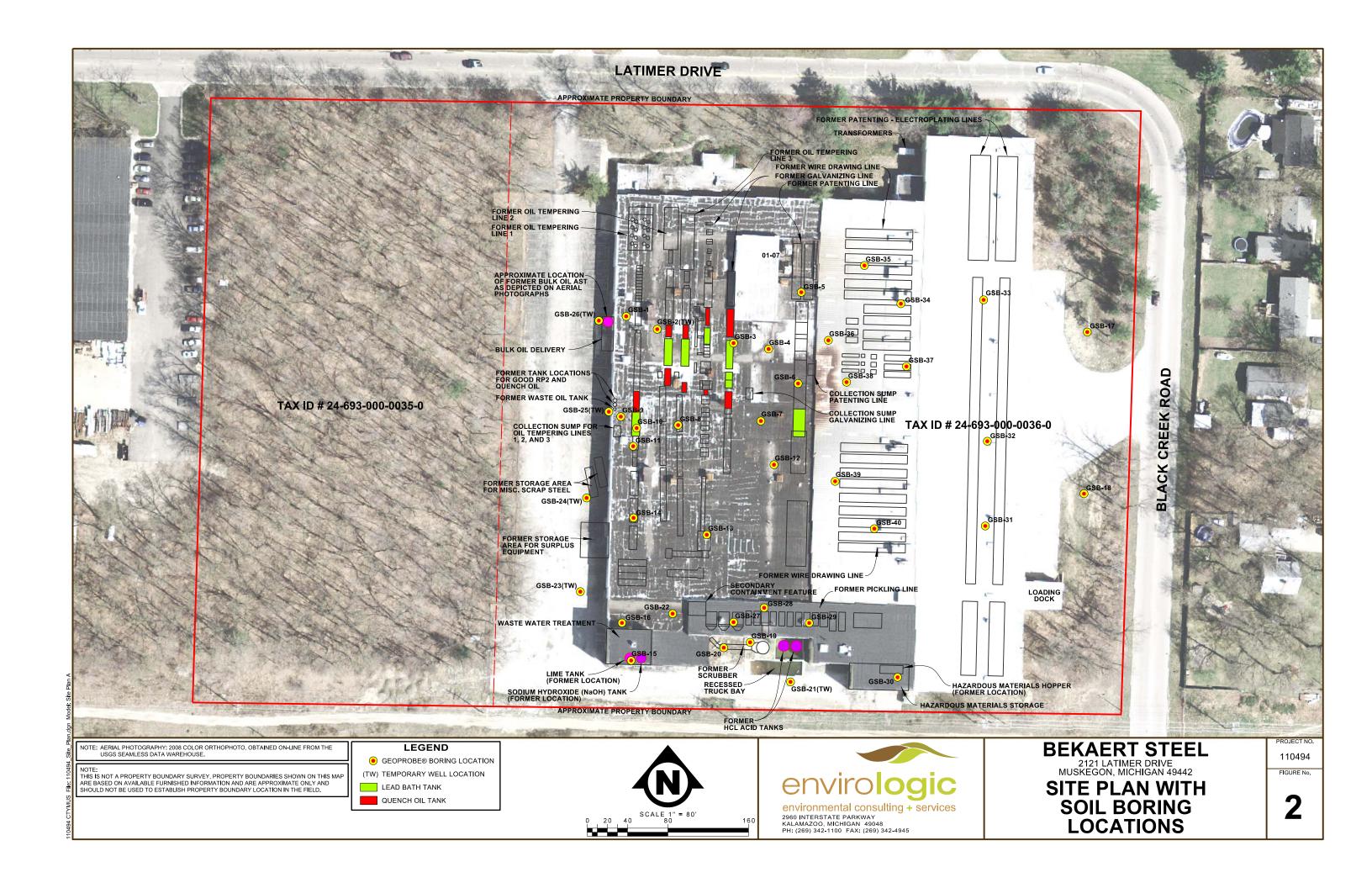






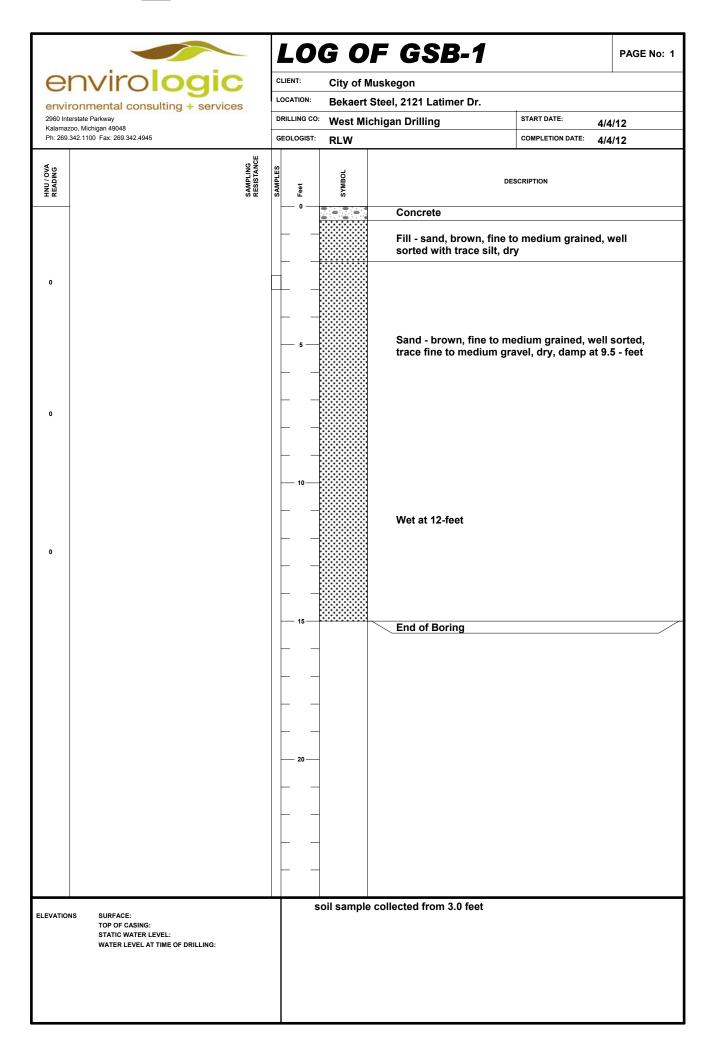
2121 LATIMER DRIVE MUSKEGON, MICHIGAN 49442

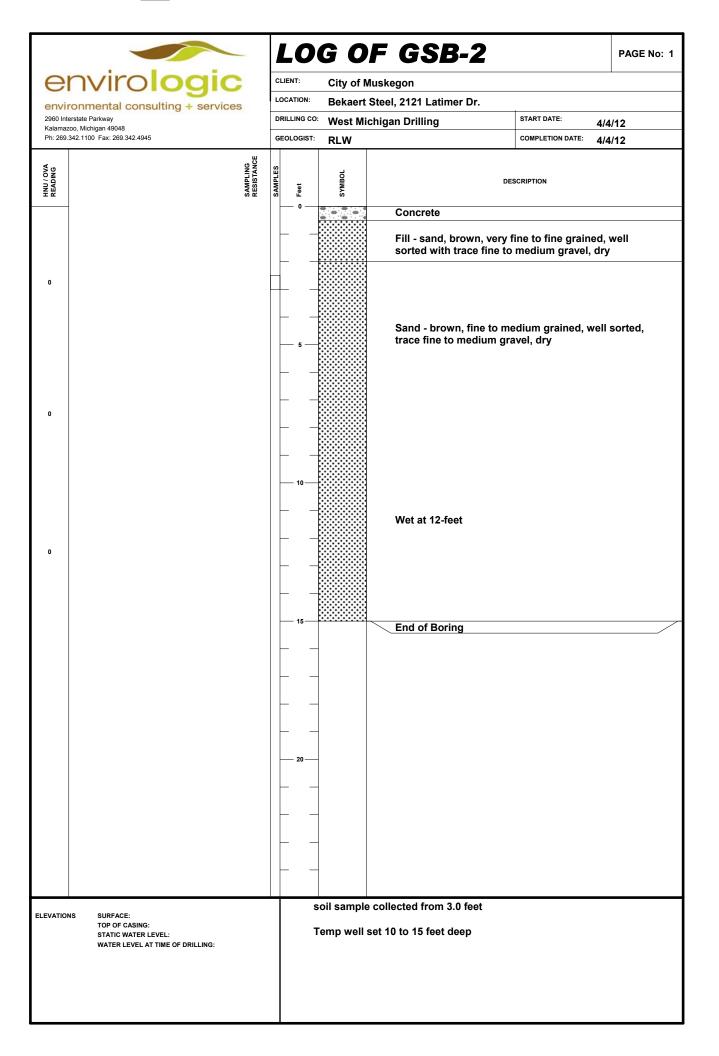
**LOCATION MAP** 

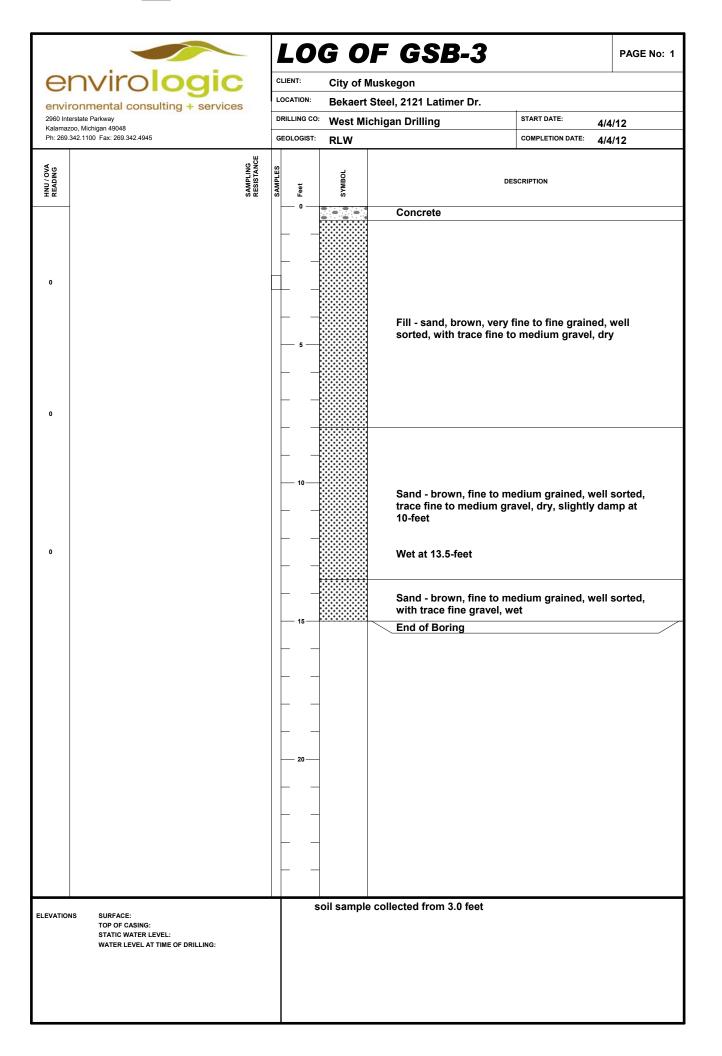


## **APPENDIX B**

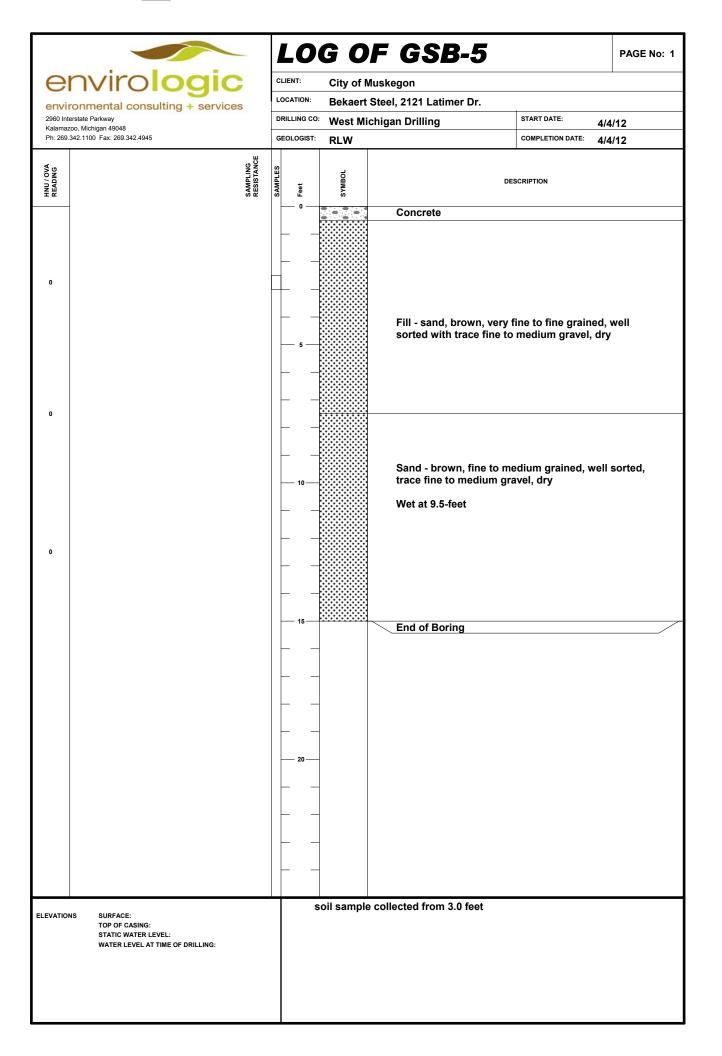
# **SOIL BORING LOGS**

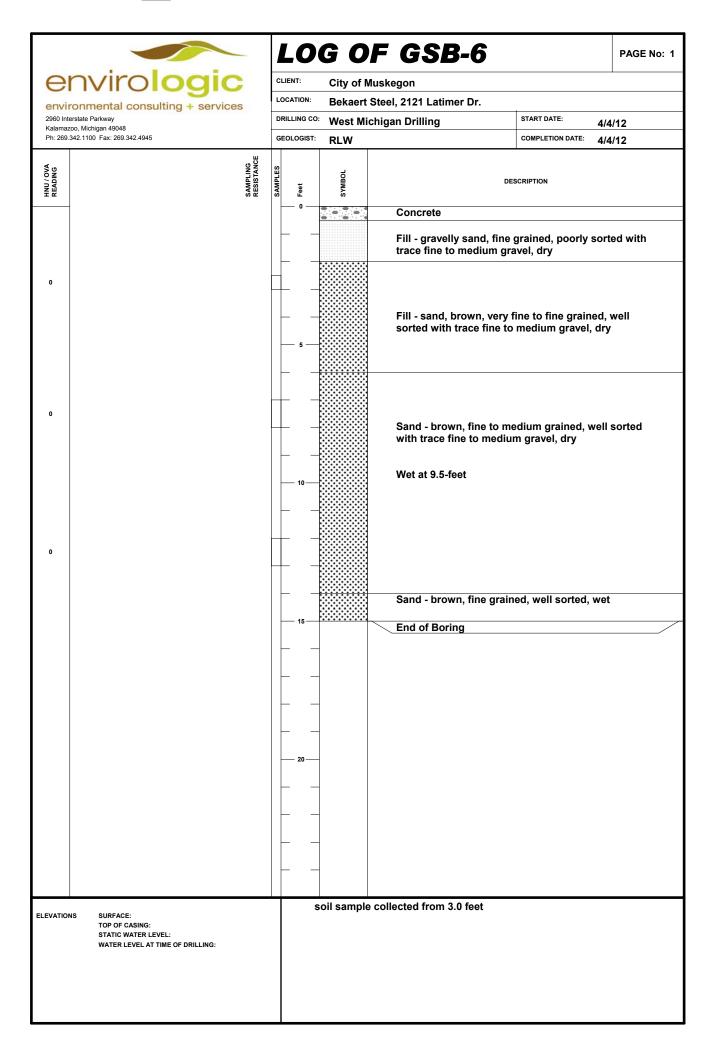






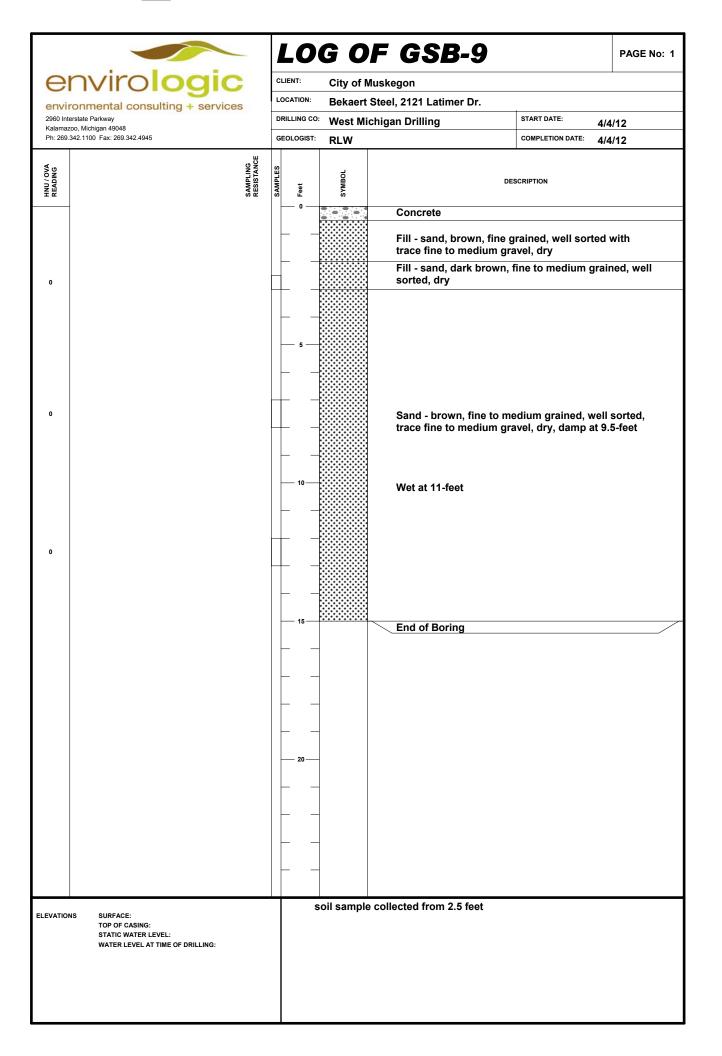
		LO	G OF	GSB-4		PAGE No: 1
e	nvirologic	CLIENT:	City of Mus	skegon		
envir	ronmental consulting + services	LOCATION:		eel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DRILLING CO	West Mich	igan Drilling	START DATE: 4/4	/12
	342.1100 Fax: 269.342.4945	GEOLOGIST:	RLW		COMPLETION DATE: 4/4	/12
HNU / OVA READING	SAMPLING	SAMPLES Feet	SYMBOL	DES	SCRIPTION	
		0 —		Concrete		
0				Fill - sand, brown, very f sorted with trace fine to	ine to fine grained, v medium gravel, dry	well
0		10		Sand - brown, fine to me trace fine to medium gra 9.5-feet Wet at 12-feet	edium grained, well s avel, dry, slightly dar	sorted, np at
		15		End of Boring		
ELEVATION		s	soil sample c	ollected from 3.0 feet		
	TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:					



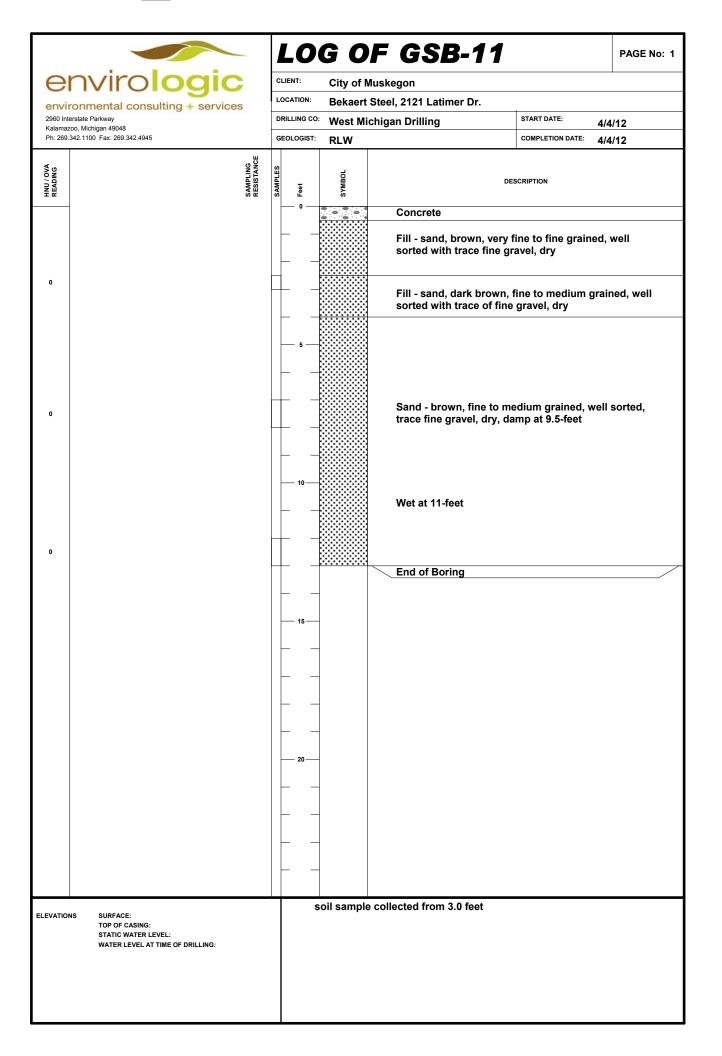


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	ronmental consulting + services	LOCATI	ON:		eel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway 200, Michigan 49048	DRILLIN	IG CO:	West Michi	gan Drilling	START DATE: 4/4	/12
	342.1100 Fax: 269.342.4945	GEOLO	GIST:	RLW		COMPLETION DATE: 4/4	/12
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES		SYMBOL	DES	SCRIPTION	
			0 —		Concrete		
0					Fill - sand, brown, very f sorted with trace fine to pieces, dry	ine to fine grained, v medium gravel & co	well oncrete
0		1	 0—		Sand - brown, fine to me trace fine to medium gra Wet at 9.5-feet	edium grained, well s evel, dry	sorted,
0			- 10		Sand - brown, fine grain silt, wet End of Boring	ed, well sorted, with	some
		_	5	oil sample co			
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		S	on sample CC	ollected from 3.0 feet		

		L	.0	G O	F	GSB-8		PAGE No: 1
e	nvirologic	CLII	ENT:	City of N	luske	gon		
envir	ronmental consulting + services	LOC	CATION:			2121 Latimer Dr.		
2960 Inte	erstate Parkway 200, Michigan 49048	DRI	LLING CO	West Mid	chiga	n Drilling	START DATE: 4/4	l/12
	342.1100 Fax: 269.342.4945	GEO	DLOGIST:	RLW			COMPLETION DATE: 4/4	I/12
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL		DES	SCRIPTION	
			— 0 —		(	Concrete		
0			- 5			Fill - sand, brown, very fi sorted with trace fine gra Sand - brown, fine to me trace fine to medium gra	avel, dry	
ı			— 10 <i>—</i>		,	race line to medium gra	ivei, ui y	
0			  		,	Wet at 10-feet		
			— 15 <i>—</i> —			End of Boring		
ELEVATION			S	oil sample	colle	cted from 3.0 feet		
	TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:							



				G OF	GSB-10	PAGE No: 1			
envirologic				City of Muskegon					
environmental consulting + services				Bekaert Steel, 2121 Latimer Dr.					
			CO:			START DATE: 4/4	/12		
Ph: 269.342.1100 Fax: 269.342.4945			ST:	RLW		COMPLETION DATE: 4/4	/12		
HNU / OVA READING	SAMPLING	SAMPLES		SYMBOL	DESCRIPTION				
		0	=		Concrete				
0		5 -			Fill - sand, brown, very f sorted with trace fine to Sand - brown, fine to me trace fine gravel, dry, da	medium gravel, dry			
0					Wet at 11-feet				
		15-	-::	*******	End of Boring				
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:			so	il sample co	ollected from 3.0 feet				



			G	OF GSB-12			PAGE No: 1		
envirologic			City	City of Muskegon					
environmental consulting + services				Bekaert Steel, 2121 Latimer Dr.					
			o: West			START DATE: 4/4	/12		
Ph: 269.342.1100 Fax: 269.342.4945			T: RLW			COMPLETION DATE: 4/4	/12		
HNU / OVA READING	SAMPLING	SAMPLES	SYMBOL		DESCRIPTION				
		0 -	7 - 7		Concrete				
					rained, well sorted v	with			
Ť			_ _		Sand - brown, fine to me trace fine gravel, dry	edium grained, well	sorted,		
0		10-	_		Wet at 9.5-feet				
			soil sam		cted from 3.0 feet				
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:								

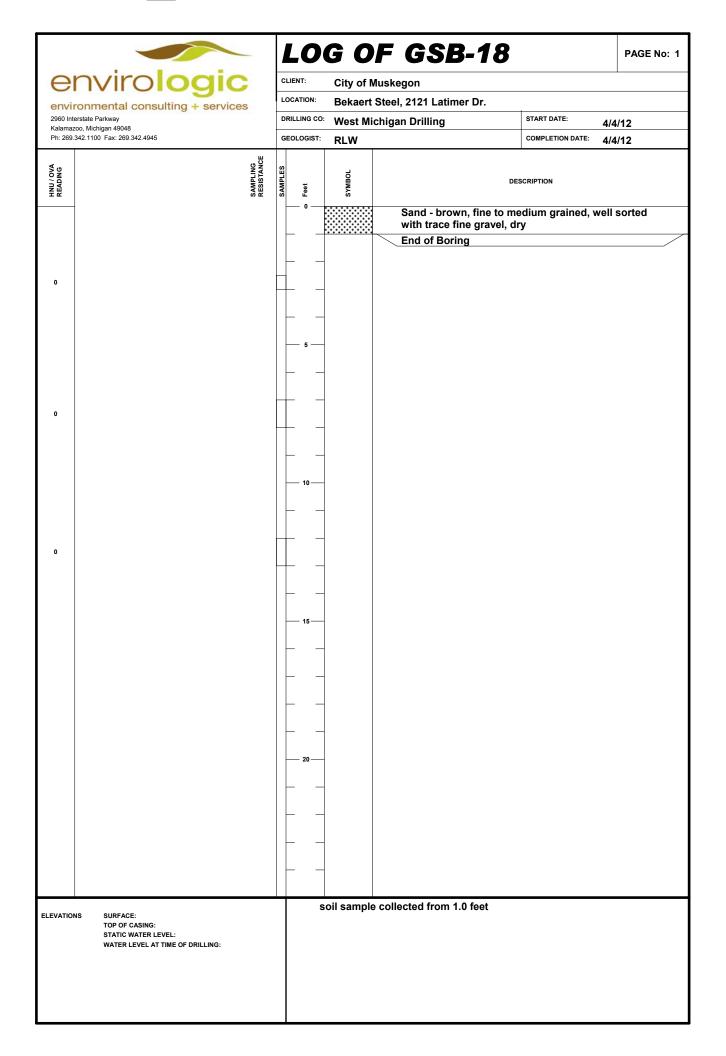
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			ENT:	City of Muskegon					
environmental consulting + services			CATION:	Bekaert Steel, 2121 Latimer Dr.					
2960 Interstate Parkway Kalamazoo, Michigan 49048			LLING CO	West Mic	West Michigan Drilling		START DATE: 4/	4/12	
Ph: 269.342.1100 Fax: 269.342.4945			OLOGIST:	RLW			COMPLETION DATE: 4/	4/12	
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION				
			— 0 —		Concrete				
0			5 —		;	Fill - sand, brown with da medium grained, well so medium gravel, dry  Sand - brown, fine to me trace fine gravel, dry	rted with trace fine	to	
0		-				End of Boring			
		-	 			<u> Liid oi Boillig</u>			
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		S	soil sample	colle	cted from 3.0 feet			

		1	LO	G	OF	<b>GSB-14</b>		PAGE No: 1		
envirologic			LIENT:	City of Muskegon						
environmental consulting + services			OCATION:			el, 2121 Latimer Dr.				
2960 Interstate Parkway Kalamazoo, Michigan 49048			RILLING CO	West Michiga		gan Drilling	START DATE: 4/4	/12		
	342.1100 Fax: 269.342.4945	GEOLOGIST:		RLW			COMPLETION DATE: 4/4	/12		
HNU / OVA READING	SAMPLING	SAMPLES				DESCRIPTION				
			— o —	= = =	-	Concrete				
0			5 — — — — — — — — — — — — — — — — — — —			Fill - sand, brown, fine to sorted with trace fine to pieces, dry  Sand - brown, fine to me trace fine gravel, dry, da  Wet at 11 - feet	medium gravel & co	oncrete		
			 15			End of Boring				
			20							
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		ş	soil sa	mple co	llected from 3.0 feet					

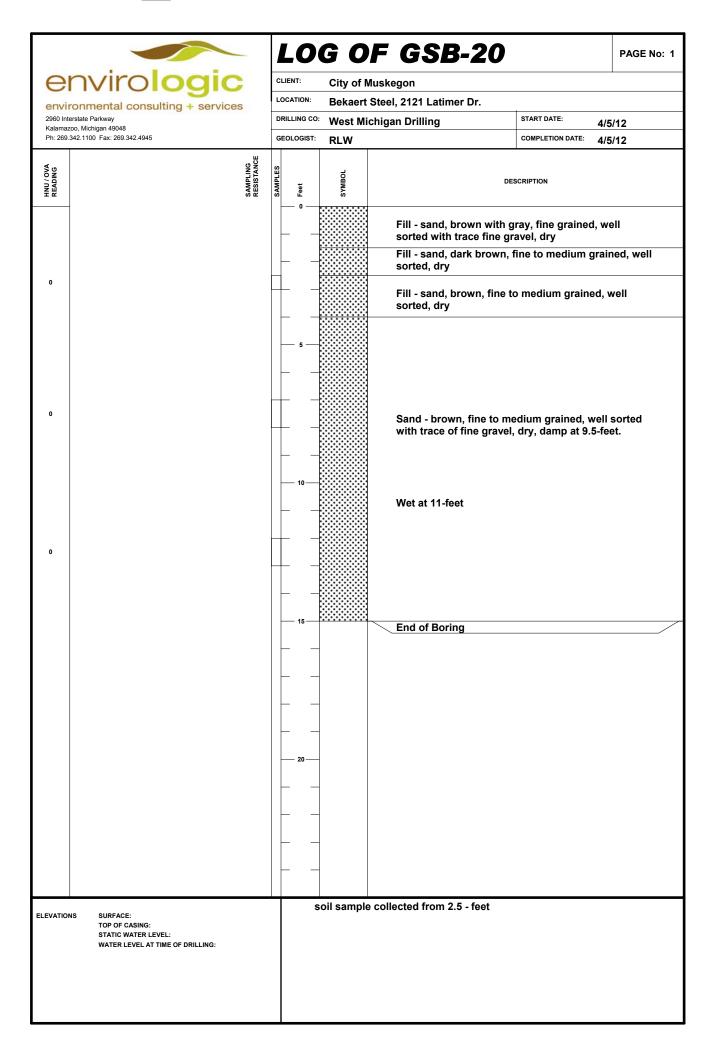
		LO	G OF	F GSB-15		PAGE No: 1
e	nvirologic	CLIENT:	City of Mu	skegon		
	ronmental consulting + services	LOCATION:	Bekaert St	teel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DRILLING CO	West Mich	igan Drilling	START DATE: 4/4	4/12
	342.1100 Fax: 269.342.4945	GEOLOGIST:	RLW		COMPLETION DATE: 4/4	4/12
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES . Feet	SYMBOL	DE	SCRIPTION	
		0 —		Concrete Fill - sand, brown, fine to sorted, damp		well
				Concrete - from 1.0 to 1.	.25	
0		_		Fill - sand, brown, fine t	o medium grained.	well
		5 —		sorted, dry	• • • • • • • • • • • • • • • • • • • •	
			-			
0		<u> </u>				
		10				
				Sand - light brown, fine sorted, trace fine gravel	to medium grained, , dry, damp at 10-fe	well et
0				Wet at 11-feet		
		15-	***********	End of Boring		
			_			
		20-	_			
			1			
			-			
			_			
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		\$	soil sample c	collected from 3.0 feet		

				G O	F	<b>GSB-16</b>		PAGE No: 1
e	nvirologic	CL	.IENT:	City of M	luske	gon		
	ronmental consulting + services	LC	CATION:			2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DF	RILLING CO	West Mic	chiga	n Drilling	START DATE: 4/4	l/12
	342.1100 Fax: 269.342.4945	GE	OLOGIST:	RLW			COMPLETION DATE: 4/4	1/12
HNU / OVA READING	SAMPLING	SAMPLES	— o —	SYMBOL		DES	SCRIPTION	
						Concrete		
0						Fill - sand, brown, fine to sorted with trace fine to the sorted with trace fine to the same and	medium gravel, dry	,
O						Wet at 11.5-feet		
		-	15			End of Boring		
			 		ooli-	oted from 2.0 feet		
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		•	soli sample	COIIE	cted from 3.0 feet			

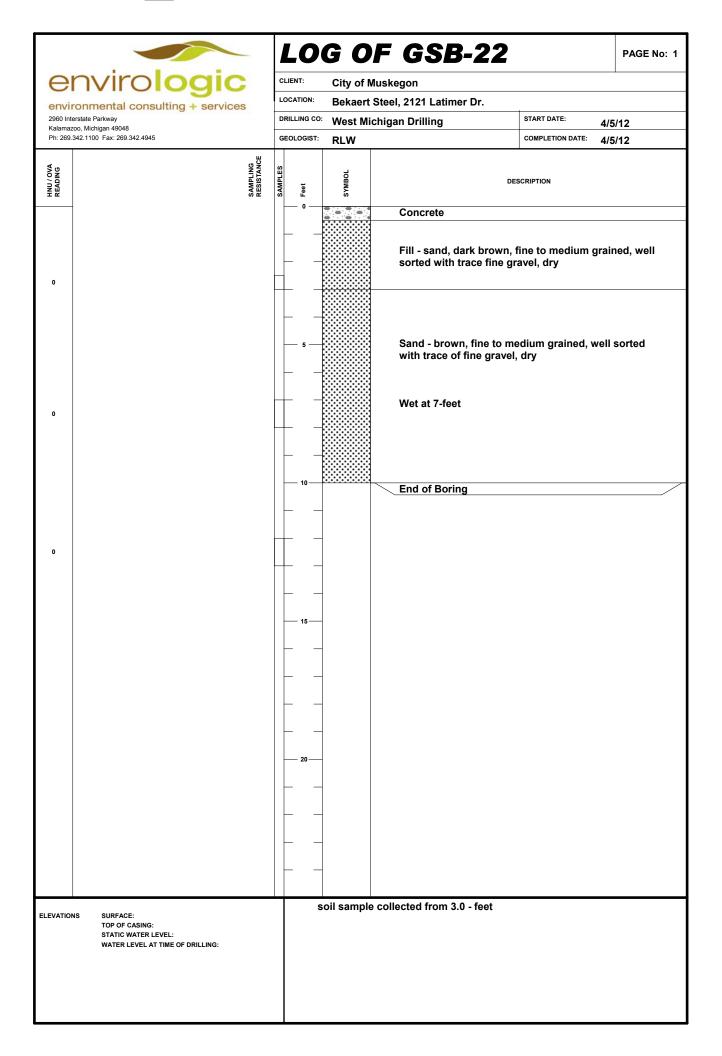
		L	.0	G O	F GSB-	<u>17</u>			PAGE No: 1
0	nvirologic	CLII	ENT:	City of	Muskegon				
envir	ronmental consulting + services	LOC	CATION:		Steel, 2121 Latimer D	Or.			
2960 Inte	erstate Parkway 200, Michigan 49048	DRI	LLING CO	West M	ichigan Drilling		START DATE:	4/4	/12
	342.1100 Fax: 269.342.4945	GEO	DLOGIST:	RLW			COMPLETION DATE:	4/4	/12
HNU / OVA READING	SAMPLING	SAMPLES	— o —	SYMBOL		DES	SCRIPTION		
				5 45 45 45 3.53.53.53	Topsoil Sand - brown, f	ine to me	dium grained v	vell «	sorted
					with trace fine g	gravel, dr	y y	· · · ·	
			_	-	End of Boring				
0									
			_						
				_					
			— 5 —	_					
			_						
				-					
0									
			_	-					
			— 10 —	_					
			_						
0				_					
				_					
			_						
			— 15 <i>—</i>	_					
		-		_					
			_						
				_					
			— 20—	-					
				_					
			_						
			_	_					
				_					
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		S	soil sampl	e collected from 1.0 fe	eet			



		L	.0	G O	F GSB-19		PAGE No: 1
e	nvirologic	CLI	ENT:	City of I	Muskegon		
	ronmental consulting + services	LOC	CATION:		Steel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DRI	LLING CC	· West Mi	chigan Drilling	START DATE: 4/4	/12
	342.1100 Fax: 269.342.4945	GE	OLOGIST:	RLW		COMPLETION DATE: 4/4	/12
HNU / OVA READING	SAMPLING	SAMPLES	— o — Feet	SYMBOL		SCRIPTION	
		_			Gravel - gray, medium to	o coarse grained, dr	y
0				- -	Fill - sand, light brown, f with trace fine gravel, dr	ine grained, well so y	rted
			_ 5 _		Fill - sand, dark brown, f sorted with trace of fine	ine to medium grain gravel, dry	ned, well
0			 		Sand - brown, fine to me	edium grained, well	sorted,
				-	dry		
			— 10 — -	_	Sand - brown, fine to me with trace of fine gravel	edium grained, well	sorted
0				= =	Wet at 13-feet		
				-			
			— 15 <i>—</i>	000000000000000000000000000000000000000	End of Boring		
				_			
			_				
				_			
			— 20 —	_			
			_				
				1			
				-			
ELEVATION	IS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		!	soil sample	e collected from 3.0 feet		

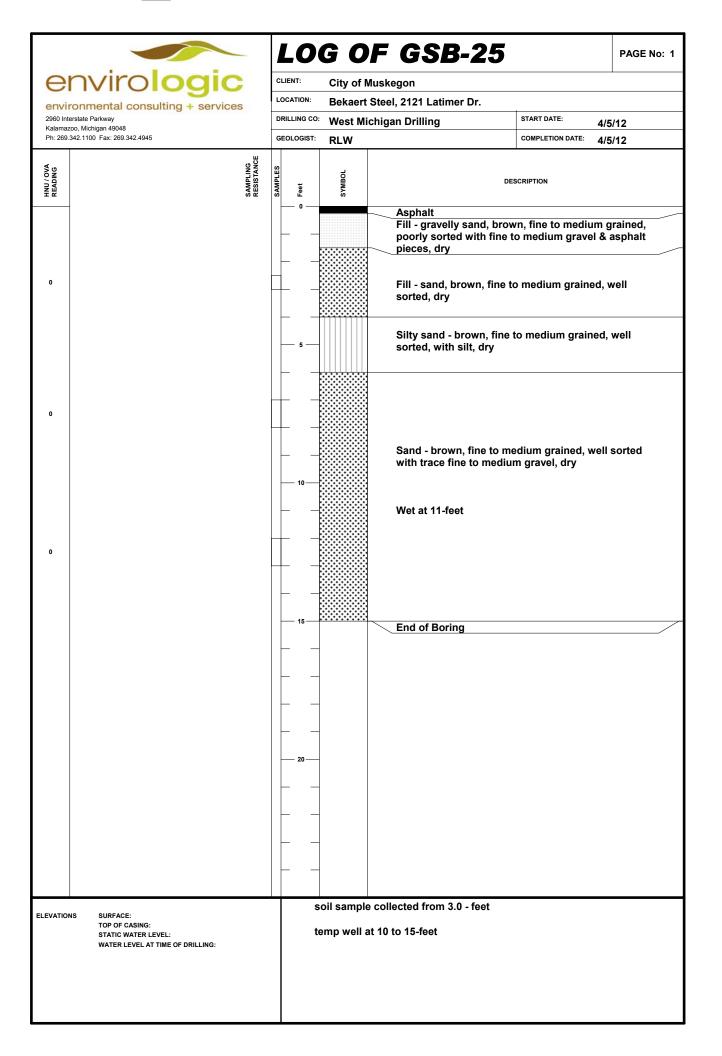


		LO	GO	F	<b>GSB-21</b>		PAGE No: 1
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envir	conmental consulting + services	LOCATION:	Bekaert	Steel	, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DRILLING CO	West Mi	ichiga	n Drilling	START DATE: 4/	5/12
	342.1100 Fax: 269.342.4945	GEOLOGIST:	RLW			COMPLETION DATE: 4/	5/12
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES	SYMBOL		DES	SCRIPTION	
		0 —	京の三の京の三の名		Asphalt		
0					Concrete  Fill - sand, brown, fine to sorted with trace fine graduates.	o medium grained, avel. dry	well
		5					
0							
J		10		1	Sand - brown, fine to me with trace fine to mediur at 10-feet	edium grained, well m gravel, dry, sligh	sorted tly damp
0					Wet at 11.5-feet		
		15			Ford of Davis		
			-		End of Boring		
		20-					
		_					
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:					ected from 3.0 - feet 10 to 15 - feet		



		LO	G O	F GSB-23		PAGE No: 1	
0	nvirologic	CLIENT:	City of N	luskegon			
envir	ronmental consulting + services	LOCATION:		Steel, 2121 Latimer Dr.			
2960 Inte	erstate Parkway	DRILLING CO:	West Mic	chigan Drilling	START DATE: 4/5	5/12	
	oo, Michigan 49048 342.1100 Fax: 269.342.4945	GEOLOGIST:	RLW		COMPLETION DATE: 4/5	5/12	
HNU / OVA READING	SAMPLING	SAMPLES Feet					
		_ 0		Asphalt Fill - gravelly sand, blac poorly sorted with fine t dry	k, fine to medium g to medium gravel &	rained, cinders,	
0				Fill - sand, brown fine to sorted, dry	o medium grained, v	vell	
0		5		Fill - sand, dark brown f sorted with trace of fine	ine to medium grair gravel, dry	ned, well	
		10		Sand - brown, fine to me with trace fine gravel, de Wet at 12-feet	edium grained, well ry, damp at 10-feet	sorted	
0		_					
		15		End of Boring			
		20					
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:				collected from 4.0 - feet at 10 to 15-feet			

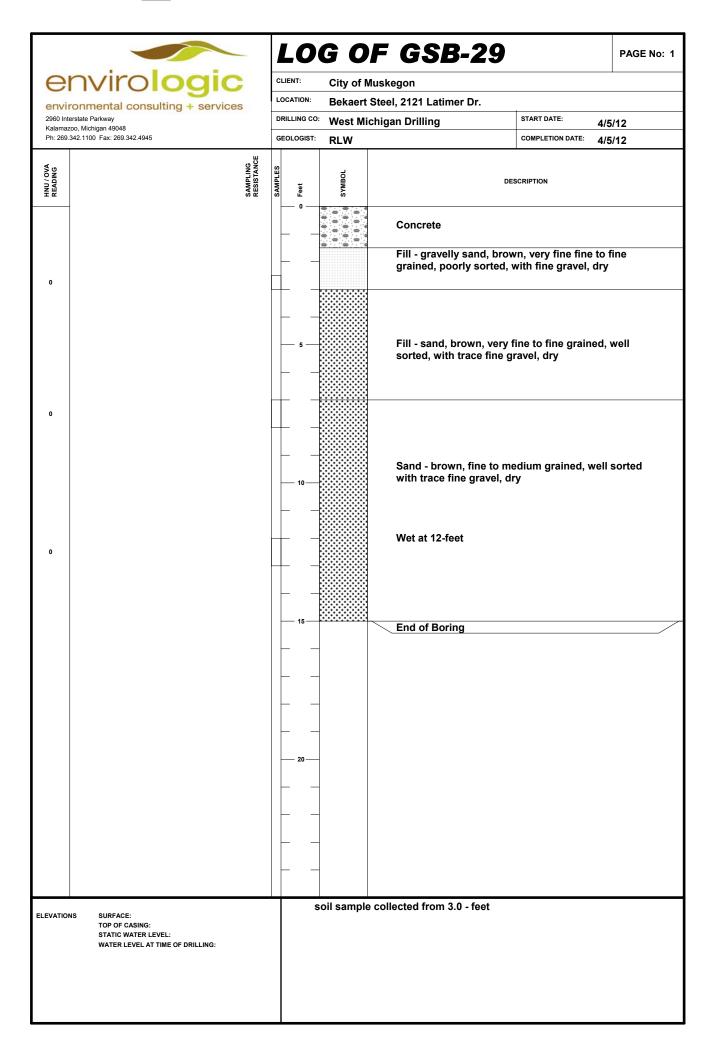
		LO	G O	F GSB-24		PAGE No: 1
	nvirologic	CLIENT:				
	IVIIOIOGIC	LOCATION:	City of M	uskegon Steel, 2121 Latimer Dr.		
2960 Inte	ronmental consulting + services	DRILLING CO		higan Drilling	START DATE: 4/	5/12
	oo, Michigan 49048 342.1100 Fax: 269.342.4945	GEOLOGIST:	RLW			5/12
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES	SYMBOL	DE	SCRIPTION	
		0 —		Asphalt Fill - gravelly sand, brow	un fina to modicum	aveine d
			*********	poorly sorted with fine t	o medium gravel, d	ry
0				Fill - sand, brown, fine to sorted with trace silt, dr	o medium grained, y	well
		5 —				
				Sand - brown, fine to medium grained, well		
0		# #				
						sorted
				with trace fine gravel, dry, damp at 10-feet		
				Wet at 11-feet		
_		_				
0		_				
		15		End of Boring		
		20				
		20				
		_				
		_				
ELEVATION	IS SURFACE:	s	oil sample	collected from 3.0 - feet		
	TOP OF CASING: STATIC WATER LEVEL:	t	emp well se	et at 10.0 - 15.0 feet.		
	WATER LEVEL AT TIME OF DRILLING:					



				G (	)F	<b>GSB-26</b>		PAGE No: 1	
0	nvirologic	CI	JENT:	City of	f Muske	gon			
	ronmental consulting + services	LC	CATION:			, 2121 Latimer Dr.			
2960 Inte	erstate Parkway oo, Michigan 49048	DF	RILLING C	D: West I	Michiga	n Drilling	START DATE: 4/5	/12	
	342.1100 Fax: 269.342.4945	GE	OLOGIST	RLW			COMPLETION DATE: 4/5	/12	
HNU / OVA READING	SAMPLING	SAMPLES	. Feet	SYMBOL		DES	SCRIPTION		
			— o —			Asphalt			
						Fill - gravelly sand, dark grained, poorly sorted w cinders, dry	brown, fine to medi vith fine to medium (	um gravel &	
0				_					
				-					
0			5	- -					
				_	Sand - brown, fine to with trace fine gravel,		edium grained, well : 'Y	sorted	
				_					
				— 10 — Wet at 11.5-feet — —					
0				-					
				_					
				— 15 <i>—</i>	*		End of Boring		
				+					
				-					
		-		-					
			— 20 —	-					
				1					
		-		-					
			soil samp	ple colle	ected from 3.0 - feet				
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:				temp wel	ll at 10 t	o 15-feet			

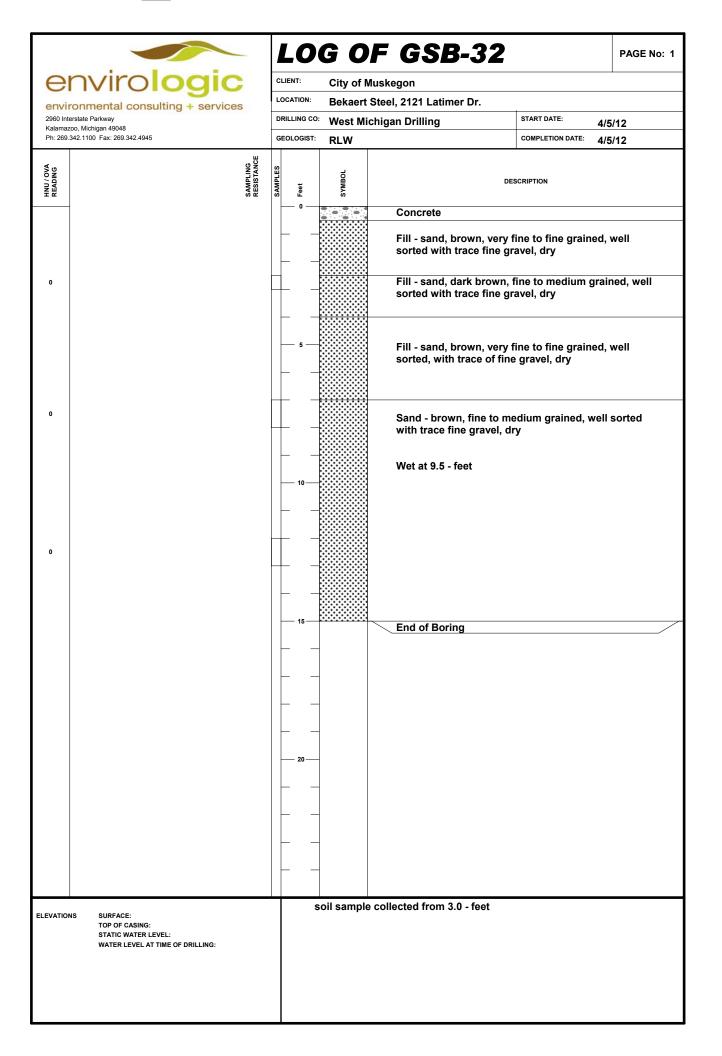
		1	LO	G O	F	<b>GSB-27</b>		PAGE No: 1
e	nvirologic	CL	IENT:	City of	Muske	gon		
	ronmental consulting + services	LO	CATION:	Bekaer	t Steel	, 2121 Latimer Dr.		
2960 Inte	erstate Parkway coo, Michigan 49048	DR	RILLING CO	· West M	ichiga	n Drilling	START DATE: 4/5	5/12
Ph: 269.	342.1100 Fax: 269.342.4945	GE	OLOGIST:	RLW			COMPLETION DATE: 4/5	5/12
HNU / OVA READING	SAMPLING	SAMPLES	— o —	SYMBOL			SCRIPTION	
			_ 0 _			Concrete Fill - sand, brown, fine to sorted, dry	o medium grained, v	well
						Concrete		
0				=		Fill - sand, brown, fine to sorted with some silt, so dry	o medium grained, vome fine to medium	well gravel,
		-		_		<b>,</b>		
			5	- -				
0				-				
			 	- -		Sand - brown, fine to me with trace fine gravel, dr	edium grained, well y	sorted
		-	— 10 —	-				
				-		Wet at 12-feet		
0				-				
		-		-				
			— 15 <i>—</i>			End of Boring		
			— 20 —					
			_					
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		;	soil sampl	e colle	cted from 3.0 - feet		

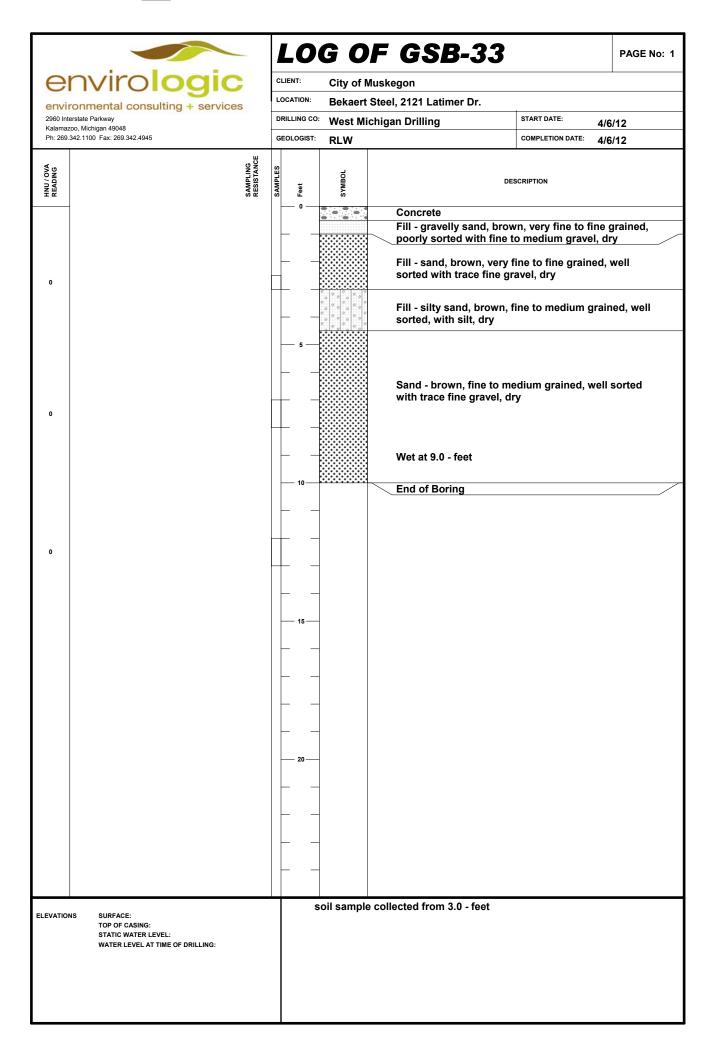
		1	LO	G O	F GSB-28		PAGE No: 1
e	nvirologic	CL	IENT:	City of N	/luskegon		
	ronmental consulting + services	LO	CATION:	Bekaert	Steel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DR	RILLING CO	· West Mi	chigan Drilling	START DATE: 4/	5/12
	342.1100 Fax: 269.342.4945	GE	OLOGIST:	RLW		COMPLETION DATE: 4/	5/12
HNU / OVA READING	SAMPLING	SAMPLES	. Feet	SYMBOL	DES	SCRIPTION	
			— 0 —		Concrete		
0			5		Fill - sand, brownish gra well sorted with trace fir Sand - brown, fine to me with trace fine gravel, dr	e gravel, dry	
			15		End of Boring		
FI FVATION	JS SURFACE-			soil sample	e collected from 3.0 - feet		
ELEVATION	IS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:			•			

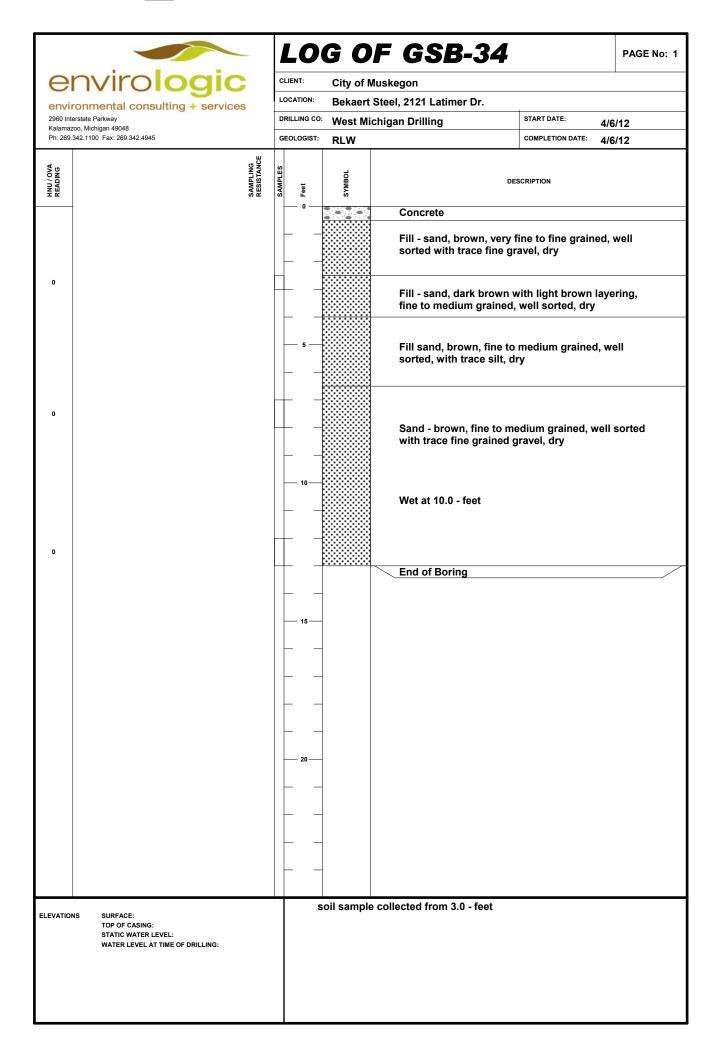


		1	LO	G O	F GSB-30		PAGE No: 1
e	nvirologic	CL	IENT:	City of I	Muskegon		
	ronmental consulting + services	LO	CATION:	Bekaert	Steel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DR	RILLING CO	· West M	ichigan Drilling	START DATE: 4/5	/12
Ph: 269.	342.1100 Fax: 269.342.4945	GE	OLOGIST	RLW	I	COMPLETION DATE: 4/5	/12
HNU / OVA READING	SAMPLING	SAMPLES	Feet	SYMBOL	DES	SCRIPTION	
			— o —		Concrete		
				- <del> </del>	Fill - sand, brown, very fi sorted with trace fine gra	ine fine to fine grair avel, dry	ed, well
0				_			
			— 5 —	-			
				- -	Sand - brown, fine to me with trace fine gravel, dr	dium grained, well y	sorted
0				- -			
		-	— 10 —	_	Wet at 12.5-feet		
0				- -			
					End of Boring		
		_	— 15 <i>—</i>		Eliu di Boring		
			20				
ELEVATION	IS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		:	soil sampl	e collected from 3.0 - feet		

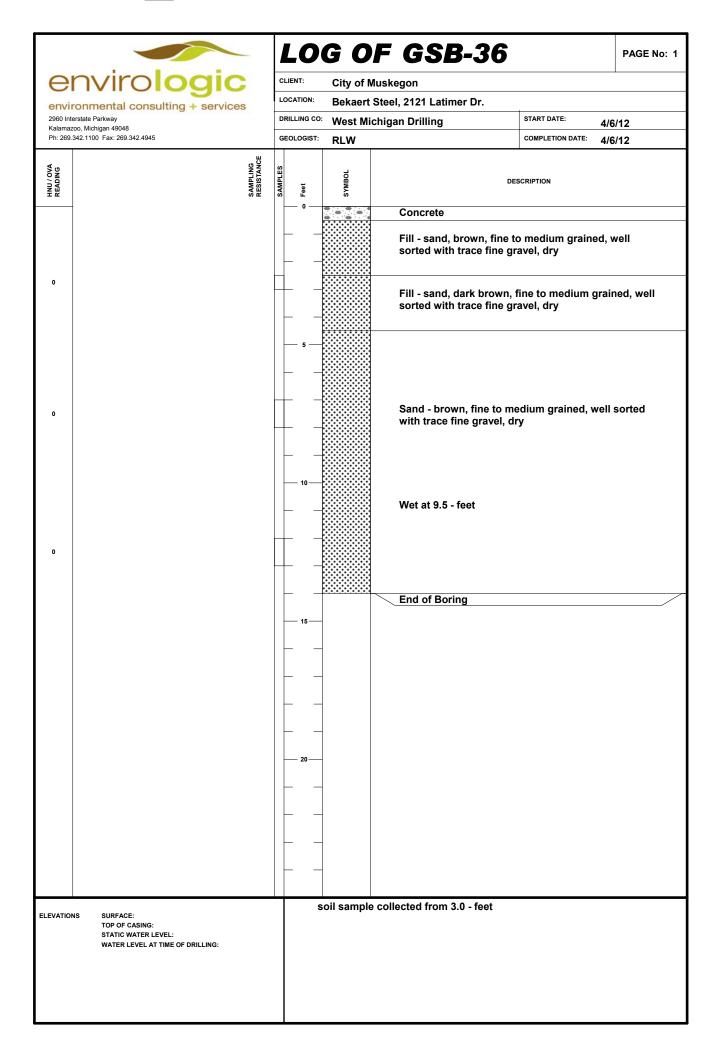
	envirologic			G	0F	<b>GSB-31</b>		PAGE No: 1	
0	nviro <b>logic</b>	CI	JENT:	City	of Musk	egon			
envir	ronmental consulting + services	LC	CATION:			el, 2121 Latimer Dr.			
2960 Inte	erstate Parkway 200, Michigan 49048	DI	RILLING CO	Wes	st Michig	an Drilling	START DATE: 4/5	/12	
	342.1100 Fax: 269.342.4945	GI	EOLOGIST:	RLV	V		COMPLETION DATE: 4/5	/12	
HNU / OVA READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL		DES	SCRIPTION		
			— o —		-	Concrete			
0	0					Fill sand, brown, very fir sorted with trace fine gr	ne to fine grained, w avel, dry	ell	
0			10			Sand - brown, fine to me with trace fine gravel, dr Wet at 9.5-feet			
		lŀ	15		****	End of Boring			
				oil sa	mnle coll				
ELEVATIONS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		S	soil sa	mpie col	ected from 3.0 - feet				







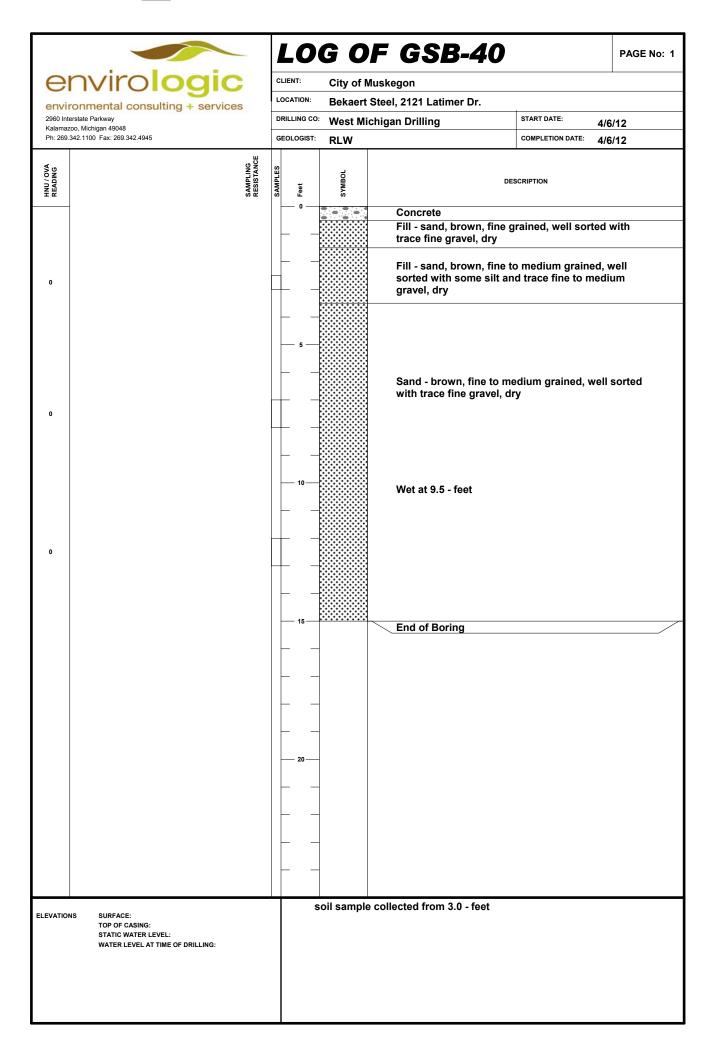
		L	.0	G O	F	<b>GSB-35</b>		PAGE No: 1					
e	nvirologic	CLIE	NT:	City of M	uske	gon							
	ronmental consulting + services	LOC	ATION:			2121 Latimer Dr.							
2960 Inte	erstate Parkway 200, Michigan 49048	DRIL	LING CO:	West Mic	higa	an Drilling START DATE:		/12					
	342.1100 Fax: 269.342.4945	GEO	LOGIST:	RLW			COMPLETION DATE: 4/6	/12					
HNU / OVA READING	SAMPLING	SAMPLES	Feet	SYMBOL									
			- 0 —		(	Concrete							
			_		!	Fill - sand, brown, fine to sorted with trace silt, dry	o medium grained, v /	vell					
0			_										
			_ _ 5										
					;	Sand - brown, fine to me	dium grained, well	sorted					
0			_			with trace line graves, di	trace fine gravel, dry, damp at 8.5 - feet						
			_										
			— 10 ——		,	Wet at 9.5 - feet							
0			_										
			_			End of Boring							
			— 15 <i>—</i> —			ena or Borning							
			_										
		_	_										
			_										
			_										
			_										
		+		oil sample	colle	cted from 3.0 - feet							
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:												



		I	<b>LO</b>	G O	F GSB-37		PAGE No: 1
e	nvirologic	CLI	IENT:	City of N	Muskegon		
envii	ronmental consulting + services	LO	CATION:	Bekaert	Steel, 2121 Latimer Dr.		
2960 Inte	erstate Parkway oo, Michigan 49048	DR	RILLING CO: West Michigan Drilling START DATE:				/12
	342.1100 Fax: 269.342.4945	GE	OLOGIST:	RLW		COMPLETION DATE: 4/6	/12
HNU / OVA READING	SAMPLING	SAMPLES	Feet	SYMBOL	DES	SCRIPTION	
			— o —		Concrete		
0			 	- - -	Fill - sand, brown, fine g trace fine gravel, dry	rained, well sorted	with
0			- 5 		Fill - sand, brown, fine to sorted, with some silt, tr	o medium grained, v ace fine gravel, dry	vell
0			10		Wet at 9.5 - feet		
EL EVATION	IS SUBSACE:			soil sample	e collected from 3.0 - feet		
ELEVATION	IS SURFACE:  TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:			·			

		LO	G OF	GSB-38		PAGE No: 1					
0	nvirologic	CLIENT:	City of Mus								
onvi	ronmental consulting + services	LOCATION:		eel, 2121 Latimer Dr.							
2960 Inte	erstate Parkway	DRILLING CO	West Michi	West Michigan Drilling START DATE:							
	200, Michigan 49048 342.1100 Fax: 269.342.4945	GEOLOGIST:		RLW COMPLETION DATE:							
HNU / OVA READING	SAMPLING	SAMPLES	SYMBOL	DE	SCRIPTION						
				Concrete  Fill - sand, brown, fine to sorted with trace fine to	o medium grained, medium gravel, dry	well					
0				Fill - sand, dark brown v medium grained, well so dry	Fill - sand, dark brown with brown layering, fine nedium grained, well sorted with trace fine grav dry						
0				Sand, brown, fine to me with trace fine gravel, di Wet at 9.5 - feet	dium grained, well s 'Y	sorted					
0				End of Davison							
		15	-	End of Boring							
		20	-								
			-								
ELEVATION	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:		soil sample co	ollected from 3.0 - feet							

		1	LO	GO	F GSB-39		PAGE No: 1
e	nviro <b>logic</b>	CL	IENT:	City of I	Muskegon		
	ronmental consulting + services	LO	CATION:	Bekaert	Steel, 2121 Latimer Dr.		
2960 Int	erstate Parkway zoo, Michigan 49048	DR	ILLING C	o: West Mi	chigan Drilling	START DATE: 4/0	6/12
	.342.1100 Fax: 269.342.4945	GE	OLOGIST	RLW		COMPLETION DATE: 4/0	5/12
HNU / OVA READING	SAMPLING	SAMPLES	Feet	SYMBOL	DES	SCRIPTION	
			— o —		Concrete		
0			5 —		Fill - sand, brown, fine to sorted with trace fine grand - brown, fine to me with trace fine gravel, dr	avel, dry	
0				-	Find of Davison		
					End of Boring		
		-	— 15— — - — -	_			
		-	20				
		_					
		-					
ELEVATIO	NS SURFACE: TOP OF CASING: STATIC WATER LEVEL: WATER LEVEL AT TIME OF DRILLING:			soil sampl	e collected from 3.0 - feet		



# **APPENDIX C**

# **LABORATORY REPORT**





toll-free fax

phone

231.773.5998 800.733.5998 231.773.6537 Trace Analytical Laboratories, Inc. 2241 Black Creek Road Muskegon, MI 49444-2673 info@trace-labs.com www.trace-labs.com

April 17, 2012

Mr. David Stegink Envirologic Technologies, Inc. 2960 Interstate Parkway Kalamazoo, MI 49048

Phone: (269) 342-1100 Fax: (269) 342-4945

RE: Trace Project T12D044

Client Project CTY MUS / 110494C

Dear Mr. Stegink:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink Project Manager

Enclosures





fax

phone 231.773.5998 toll-free 800.733.5998 231.773.6537

Trace Analytical Laboratories, Inc. 2241 Black Creek Road Muskegon, MI 49444-2673 info@trace-labs.com www.trace-labs.com

# **SAMPLE SUMMARY**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T12D044-01	Trip Blank #1	Water	rw	04/04/12	04/04/12 16:31
T12D044-02	Methanol Blank	Soil	rw	04/04/12	04/04/12 16:31
T12D044-03	110494GSB-1 (3')	Soil	rw	04/04/12 10:35	04/04/12 16:31
T12D044-04	110494GSB-2 (3')	Soil	rw	04/04/12 10:50	04/04/12 16:31
T12D044-05	110494GSB-3 (3')	Soil	rw	04/04/12 11:05	04/04/12 16:31
T12D044-06	110494GSB-4 (3')	Soil	rw	04/04/12 11:35	04/04/12 16:31
T12D044-07	Floor Dust	Soil	rw	04/04/12 12:00	04/04/12 16:31
T12D044-08	110494GSB-5 (3')	Soil	rw	04/04/12 12:35	04/04/12 16:31
T12D044-09	110494GSB-6 (3')	Soil	rw	04/04/12 14:10	04/04/12 16:31
T12D044-10	110494GSB-7 (3')	Soil	rw	04/04/12 14:25	04/04/12 16:31
T12D044-11	110494GSB-8	Soil	rw	04/04/12 14:45	04/04/12 16:31
T12D044-12	110494GSB-9	Soil	rw	04/04/12 15:40	04/04/12 16:31
T12D044-13	110494GSB-10	Soil	rw	04/04/12 15:55	04/04/12 16:31
T12D044-14	110494GSB-11	Soil	rw	04/04/12 16:20	04/04/12 16:31
T12D044-15	110494M-1S	Soil	rw	04/04/12	04/04/12 16:31
T12D044-16	Trip Blank #2	Water	rw	04/04/12	04/05/12 15:31
T12D044-17	110494GSB-12 (3')	Soil	rw	04/04/12 16:50	04/05/12 15:31
T12D044-18	110494GSB-13 (3')	Soil	rw	04/04/12 17:05	04/05/12 15:31
T12D044-19	110494GSB-14 (3')	Soil	rw	04/04/12 17:30	04/05/12 15:31
T12D044-20	110494GSB-15 (3')	Soil	rw	04/04/12 18:00	04/05/12 15:31
T12D044-21	110494GSB-16 (3')	Soil	rw	04/04/12 18:25	04/05/12 15:31
T12D044-22	110494GSB-17 (1')	Soil	rw	04/04/12 18:45	04/05/12 15:31
T12D044-23	110494GSB-18 (1')	Soil	rw	04/04/12 18:55	04/05/12 15:31
T12D044-24	110494EB-1S	Water	rw	04/04/12 19:05	04/05/12 15:31
T12D044-25	110494M-2S	Soil	rw	04/04/12	04/05/12 15:31
T12D044-26	110494GSB-19 (3')	Soil	rw	04/05/12 09:10	04/05/12 15:31
T12D044-27	110494GSB-20 (2-1/2')	Soil	rw	04/05/12 09:30	04/05/12 15:31
T12D044-28	110494GSB-21 (3')	Soil	rw	04/05/12 09:50	04/05/12 15:31
T12D044-29	110494GSB-22 (3')	Soil	rw	04/05/12 10:15	04/05/12 15:31
T12D044-30	110494GSB-23 (4')	Soil	rw	04/05/12 10:35	04/05/12 15:31
T12D044-31	110494GSB-24 (3')	Soil	rw	04/05/12 10:55	04/05/12 15:31
Γ12D044-32	110494GSB-25 (3')	Soil	rw	04/05/12 11:05	04/05/12 15:31
Γ12D044-33	110494GSB-26 (3')	Soil	rw	04/05/12 11:25	04/05/12 15:31
T12D044-34	110494GSB-27 (3')	Soil	rw	04/05/12 13:25	04/05/12 15:31
T12D044-35	110494GSB-28 (3')	Soil	rw	04/05/12 13:40	04/05/12 15:31
T12D044-36	110494GSB-29 (3')	Soil	rw	04/05/12 14:15	04/05/12 15:31

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T12D044-38	110494GSB-31 (3')	Soil	rw	04/05/12 15:00	04/05/12 15:31
T12D044-39	110494GSB-32 (3')	Soil	rw	04/05/12 15:15	04/05/12 15:31
T12D044-40	110494EB-2S	Water	rw	04/05/12 15:30	04/05/12 15:31
T12D044-41	110494M-3S	Soil	rw	04/05/12	04/05/12 15:31
T12D044-42	Trip Blank #3	Aqueous	rw	04/06/12	04/06/12 12:53
T12D044-43	110494GSB-33 (3')	Soil	rw	04/06/12 08:40	04/06/12 12:53
T12D044-44	110494GSB-34 (3')	Soil	rw	04/06/12 09:00	04/06/12 12:53
T12D044-45	110494GSB-35 (3')	Soil	rw	04/06/12 09:35	04/06/12 12:53
T12D044-46	110494GSB-36 (3')	Soil	rw	04/06/12 09:50	04/06/12 12:53
T12D044-47	110494GSB-37 (3')	Soil	rw	04/06/12 10:15	04/06/12 12:53
T12D044-48	110494GSB-38 (3')	Soil	rw	04/06/12 10:35	04/06/12 12:53
T12D044-49	110494GSB-39 (3')	Soil	rw	04/06/12 10:55	04/06/12 12:53
T12D044-50	110494GSB-40	Soil	rw	04/06/12 11:30	04/06/12 12:53
T12D044-51	110494M-4S	Soil	rw	04/06/12	04/06/12 12:53
T12D044-52	110494EB-3S	Aqueous	rw	04/06/12 12:15	04/06/12 12:53



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#### AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

#### **DEFINITIONS**

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate
RPD Relative Percent Difference

DUP Matrix Duplicate

RDL Reporting Detection Limit
MCL Maximum Contamination Limit
TIC Tentatively Identified Compound

<, ND or U Indicates the compound was analyzed for but not detected

\* Indicates a result that exceeds its associated MCL or Surrogate control limits

N Indicates that the compound has not been evaluated by NELAC

NA Indicates that the compound is not available.

#### **DATA QUALIFIERS**

Trace ID:	T028530-BS1	
Analysis	s: EPA 6020	
Silver		Note 112: The LCS recovery was out of control high. Because there were no positive results for this analyte in this QC batch, no data require qualification.
Trace ID:	T028530-MS1	
Analysis	s: EPA 6020	
Silver		Note 208: The MS recovery was out of control. Because the MSD recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Trace ID:	T028530-MSD1	
Analysis	s: EPA 6020	
Silver		Note 208: The MS recovery was out of control. Because the MSD recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Trace ID:	T028550-BS1	
Analysis	s: EPA 6020	
Silver		Note 112: The LCS recovery was out of control high. Because there were no positive results for this analyte in this QC batch, no data require qualification.
Trace ID:	T028550-MSD1	
Analysis	s: EPA 6020	
Silver		Note 209: The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Trace ID:	T028558-BS1	
Analysis	s: EPA 6020	
Silver		Note 112: The LCS recovery was out of control high. Because there were no positive results for this analyte in this QC batch, no data require qualification.

Trace ID: T028562-MS1 *Analysis: EPA 8260B* 

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Chlorobenzene	Note 230: The MS and MSD were out of control high. Because there was no positive result in the non-spiked version of the sample, no data require qualification.
Trace ID: T028562-MSD1  Analysis: EPA 8260B	
Chlorobenzene	Note 230: The MS and MSD were out of control high. Because there was no positive result in the non-spiked version of the sample, no data require qualification.
Toluene	Note 209: The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Trace ID: T12D044-06RE1  Analysis: EPA 8270C	
Benzo (a) anthracene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Benzo (a) pyrene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Benzo (b) fluoranthene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Benzo (g,h,i) perylene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Benzo (k) fluoranthene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Chrysene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Dibenz (a,h) anthracene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Fluoranthene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Indeno (1,2,3-cd) pyrene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Pyrene	Note 402: The reporting limit was raised due to a dilution required because of chromatographic interference with the internal standards.
Trace ID: T12D044-14  Analysis: EPA 8270C	
	Note 407: The reporting limit was raised due to a post extraction dilution required based on matrix interference present in the sample.
Trace ID: T12D044-36	
Analysis: EPA 8270C	Note 444 . The assessment of the transport of the 1000 C

Note 414: The reporting limit was raised due to dilution.

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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

race ID: T12D044-01 ample ID: Trip Blank #1			Collected: Received:	04/04/12 04/04/12 16:3	31	Matrix:	Water		
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
OLATILE ORGANIC COMPOUNDS	S BY GC-MS								
Analysis Method: EPA 8260B									
Batch: T028561									
Dichlorodifluoromethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Chloromethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Vinyl chloride	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromomethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Chloroethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Trichlorofluoromethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Diethyl ether	<10 ug/L	10	1	04/09/12	was	04/09/12	was	N	
Tert-butyl alcohol	<50 ug/L	50	1	04/09/12	was	04/09/12	was	N	
1,1-Dichloroethene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Acetone	<50 ug/L	50	1	04/09/12	was	04/09/12	was		
lodomethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
Carbon disulfide	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Methyl-tert-butyl ether	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Methylene chloride	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Acrylonitrile	<2.0 ug/L	2.0	1	04/09/12	was	04/09/12	was		
trans-1,2-Dichloroethene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1-Dichloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Diisopropyl Ether	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
2-Butanone	<25 ug/L	25	1	04/09/12	was	04/09/12	was		
cis-1,2-Dichloroethene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
t-Butyl Ethyl Ether	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
Bromochloromethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Tetrahydrofuran	<90 ug/L	90	1	04/09/12	was	04/09/12	was	N	
Chloroform	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1.1.1-Trichloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Carbon tetrachloride	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Benzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
t-Amyl Methyl Ether	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2-Dichloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	• •	
Cyclohexane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
Trichloroethene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	. •	
1,2-Dichloropropane	<1.0 ug/L		1	04/09/12	was	04/09/12	was		
Dibromomethane	<1.0 ug/L <5.0 ug/L	1.0	1	04/09/12		04/09/12			
Bromodichloromethane	<5.0 ug/L <1.0 ug/L	5.0		04/09/12	was	04/09/12	was		
	<del>-</del>	1.0	1		was		was		
cis-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		

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<1.0 ug/L

1.0

04/09/12

04/09/12

was

Toluene



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

race ID: T12D044-01 ample ID: Trip Blank #1			Collected: Received:	04/04/12 04/04/12 16:3	31	Matrix:	Water		
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANIC COMPOUNDS									
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
2-Hexanone	<50 ug/L	50	1	04/09/12	was	04/09/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/09/12	was	04/09/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/09/12	was	04/09/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	-	
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
Surrogates:	0.0 03.2	5.0	•			<b></b>	20	••	
1,2-Dichloroethane-d4	102 %	68-133	1	04/09/12	was	04/09/12	was		
Toluene-d8	100 %	75-120	1	04/09/12	was	04/09/12	was		

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#### **ANALYTICAL RESULTS**

T12D044 Trace Project ID:

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-01 Sample ID: Trip Blank #1			Collected:	04/04/12 04/04/12 16:	31	Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE ORGANIC COMPO	OUNDS BY GC-MS								
4-Bromofluorobenzene	89 %	69-119	1	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	79 %	72-127	1	04/09/12	was	04/09/12	was		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-02 Date Collected: 04/04/12 Matrix: Soil Sample ID: Methanol Blank Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 <250 ug/kg dry 04/09/12 04/09/12 Chloromethane 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was was 50 <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 250 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-02  Sample ID: Methanol Blank			Collected: Received:	04/04/12 04/04/12 16:3	31	Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
OLATILE ORGANIC COMPOU	NDS BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was		
Naphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
2-Methylnaphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
Surrogates:	,								
1,2-Dichloroethane-d4	93 %	68-133	50	04/09/12	was	04/09/12	was		
Toluene-d8	96 %	75-120	50	04/09/12	was	04/09/12	was		

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID:			Date Collected: Date Received:		04/04/12 04/04/12 16:31		Matrix: Soil			
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE (	ORGANIC COMPOUNDS	S BY GC-MS								_
4-Bromo	ofluorobenzene	89 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dich	nlorobenzene-d4	81 %	72-127	50	04/09/12	was	04/09/12	was		
WET CHEM	ISTRY									
	thod: % Calculation									
	T028629									
% Solids		100 % by Wt.	0.10	1	04/13/12	bd	04/13/12	bd	N	



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-03 Date Collected: 04/04/12 10:35 Matrix: Soil Sample ID: 110494GSB-1 (3') Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/10/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/10/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/10/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 kb 04/10/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/09/12 04/10/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 kb 04/10/12 330 avl Pyrene <330 ug/kg dry 04/09/12 kb 04/10/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/10/12 avl 330 04/09/12 04/10/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/10/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh avl <330 ug/kg dry 04/09/12 04/10/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/10/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 86 % 36-98 1 04/09/12 kb 04/10/12 avl 2-Fluorobiphenyl 74 % 44-105 04/09/12 kb 04/10/12 avl Terphenyl-d14 85 % 46-109 04/09/12 kb 04/10/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 8.4 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 3.2 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 1.2 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.5 mg/kg dry 1 04/09/12 jd 1.0 ns Zinc 04/09/12 04/12/12 5.4 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028530 10 04/09/12 04/13/12 Arsenic 1.9 mg/kg dry 0.12 ns jd Selenium <0.38 mg/kg dry 10 04/09/12 04/13/12 jd 0.38 ns

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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0.10

10

04/09/12

ns

04/13/12

jd



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-03 Date Collected: 04/04/12 10:35 Matrix: Soil

Sample ID: 110494GSB-1 (3') Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

**WET CHEMISTRY** 

Analysis Method: % Calculation

Batch: T028486

% Solids 97 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-04 Date Collected: 04/04/12 10:50 Matrix: Soil Sample ID: 110494GSB-2 (3') Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/10/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/10/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/10/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 kb 04/10/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/09/12 04/10/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 kb 04/10/12 330 avl Pyrene <330 ug/kg dry 04/09/12 kb 04/10/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/10/12 avl 330 04/09/12 04/10/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/10/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh avl <330 ug/kg dry 04/09/12 04/10/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/10/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 88 % 36-98 1 04/09/12 kb 04/10/12 avl 2-Fluorobiphenyl 77 % 44-105 04/09/12 kb 04/10/12 avl Terphenyl-d14 84 % 46-109 04/09/12 kb 04/10/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 7.0 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 2.3 mg/kg dry 1 ns jd 2.0 <1.0 mg/kg dry 04/09/12 04/12/12 jd Copper 1.0 1 ns 1.5 mg/kg dry 1 04/09/12 04/12/12 Lead 1.0 ns jd 04/09/12 04/12/12 Zinc 5.0 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.55 mg/kg dry 10 04/09/12 ns 04/17/12 jd 0.11 Selenium <0.38 mg/kg dry 10 04/09/12 04/17/12 jd ns 0.38

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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04/09/12

ns

04/17/12

jd

0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-04 Date Collected: 04/04/12 10:50 Matrix: Soil

Sample ID: 110494GSB-2 (3') Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

WET CHEMISTRY

**METALS, TOTAL** 

Analysis Method: % Calculation

Batch: T028486

% Solids 98 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-05 Date Collected: 04/04/12 11:05 Matrix: Soil Sample ID: 110494GSB-3 (3') Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/10/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/10/12 2-Methylnaphthalene kb avl 330 04/09/12 04/10/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 kb 04/10/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/09/12 04/10/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 kb 04/10/12 330 avl Pyrene <330 ug/kg dry 04/09/12 kb 04/10/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/10/12 avl 330 04/09/12 04/10/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/10/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/10/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh avl <330 ug/kg dry 04/09/12 04/10/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/10/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 77 % 36-98 1 04/09/12 kb 04/10/12 avl 2-Fluorobiphenyl 68 % 44-105 04/09/12 kb 04/10/12 avl Terphenyl-d14 75 % 46-109 04/09/12 kb 04/10/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 4.2 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 <2.0 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 1.9 mg/kg dry 1 ns jd 1.0 7.5 mg/kg dry 1 04/09/12 04/12/12 Lead 1.0 ns jd 04/09/12 04/12/12 Zinc 7.4 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.39 mg/kg dry 0.12 10 04/09/12 ns 04/17/12 jd Selenium <0.39 mg/kg dry 10 04/09/12 04/17/12 jd ns 0.39

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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04/09/12

ns

04/17/12

jd

0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-05 Date Collected: 04/04/12 11:05 Matrix: Soil

Sample ID: 110494GSB-3 (3') Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028530

Mercury  $<0.050 \text{ mg/kg dry} \qquad 0.050 \qquad 1 \qquad 04/09/12 \quad \text{ns} \qquad 04/10/12 \quad \text{jd}$ 

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028486

% Solids 100 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-06 Date Collected: 04/04/12 11:35 Matrix: Soil Sample ID: 110494GSB-4 (3') Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/10/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/10/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/10/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/10/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/10/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/10/12 330 kb avl Fluoranthene <330 ug/kg dry 10 04/09/12 04/11/12 402 330 kb avl Pyrene <830 ug/kg dry 10 04/09/12 kb 04/11/12 402 830 avl Benzo (a) anthracene <330 ug/kg dry 10 04/09/12 kb 04/11/12 avl 402 330 04/09/12 04/11/12 Chrysene <330 ug/kg dry 10 kb avl 402 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 10 kb avl 402 330 10 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry kb avl 402 330 10 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry kb avl 402 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 10 04/09/12 kh 04/11/12 avl 402 <330 ug/kg dry 10 04/09/12 04/11/12 402 Dibenz (a,h) anthracene 330 kb avl 04/11/12 <330 ug/kg dry 10 04/09/12 Benzo (g,h,i) perylene 330 kb avl 402 Surrogates: Nitrobenzene-d5 85 % 36-98 1 04/09/12 kb 04/10/12 avl 2-Fluorobiphenyl 82 % 44-105 04/09/12 kb 04/10/12 avl Terphenyl-d14 82 % 46-109 10 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 4.0 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 <2.0 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 3.2 mg/kg dry 1 ns jd 1.0 1 04/09/12 04/12/12 Lead 14 mg/kg dry 1.0 ns jd 04/09/12 04/12/12 Zinc 11 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.46 mg/kg dry 0.12 10 04/09/12 ns 04/17/12 jd Selenium <0.40 mg/kg dry 10 04/09/12 04/17/12 jd ns 0.40

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<0.10 mg/kg dry

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10

04/09/12

ns

04/17/12

jd

0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-06 Date Collected: 04/04/12 11:35 Matrix: Soil

Sample ID: 110494GSB-4 (3') Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

**WET CHEMISTRY** 

Analysis Method: % Calculation

Batch: T028486

% Solids 100 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-07 Date Collected: 04/04/12 12:00 Matrix: Soil

Sample ID: Floor Dust Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

**METALS, TOTAL** 

Analysis Method: EPA 6010B

Batch: T028530

32000 mg/kg dry 100 04/09/12 04/13/12 Lead 94 ns jd Zinc 12000 mg/kg dry 10 04/09/12 04/13/12 jd 9.4 ns



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-08 Date Collected: 04/04/12 12:35 Matrix: Soil

Sample ID: 110494GSB-5 (3') Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was was 50 <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was

#### **CERTIFICATE OF ANALYSIS**

<100 ug/kg dry

100

50

04/09/12

was

04/09/12

was

Toluene



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

 Trace ID:
 T12D044-08
 Date Collected:
 04/04/12 12:35
 Matrix:
 Soil

 Sample ID:
 110494GSB-5 (3')
 Date Received:
 04/04/12 16:31

ample ID: 110494GSB-5 (3')		Date F	Received:	04/04/12 16:3	31				
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
OLATILE ORGANIC COMPOUNDS	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was		
Naphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was	-	
2-Methylnaphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
Surrogates:	·	550		· · -				• •	
1,2-Dichloroethane-d4	89 %	68-133	50	04/09/12	was	04/09/12	was		
Toluene-d8	96 %	75-120	50	04/09/12	was	04/09/12	was		

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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-08 Sample ID: 110494GSB-5 (3')		Date Collected:  Date Received:		04/04/12 12:35 04/04/12 16:31		Matrix: Soil			
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUNDS	BY GC-MS								
4-Bromofluorobenzene	90 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	82 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COMPO	UNDS BY GC-MS								
Analysis Method: EPA 8270C Batch: T028525									
Naphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/09/12	kb	04/10/12	avl		
Surrogates:									
Nitrobenzene-d5	85 %	36-98	1	04/09/12	kb	04/10/12	avl		
2-Fluorobiphenyl	74 %	44-105	1	04/09/12	kb	04/10/12	avl		

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77 %

46-109

04/09/12

kb

04/10/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-08 Date Collected: 04/04/12 12:35 Matrix: Soil Sample ID: 110494GSB-5 (3') Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 Barium 04/09/12 04/12/12 11 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/09/12 ns 04/12/12 jd 0.20 Chromium 04/09/12 04/12/12 3.4 mg/kg dry 1 jd 2.0 ns Copper <1.0 mg/kg dry 04/09/12 ns 04/12/12 jd 1.0 Lead 2.0 mg/kg dry 1.0 04/09/12 ns 04/12/12 jd Zinc 12 mg/kg dry 1.0 04/09/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.75 mg/kg dry 0.12 10 04/09/12 ns 04/17/12 jd 10 04/09/12 04/17/12 Selenium <0.38 mg/kg dry jd 0.38 ns <0.10 mg/kg dry 10 04/09/12 04/17/12 Silver jd ns 0.10 Analysis Method: EPA 7471A Batch: T028530 Mercury <0.050 mg/kg dry 04/09/12 04/10/12 0.050 ns jd **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028486 % Solids 98 % by Wt. 04/05/12 04/05/12 Ν 0.10 as bd

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Trace ID: T12D044-09 Sample ID: 110494GSB-6 (3')			Collected: Received:	04/04/12 14:1 04/04/12 16:3		Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
SEMI-VOLATILE ORGANIC COMPOU	UNDS BY GC-MS								
Analysis Method: EPA 8270C									
Batch: T028525									
Naphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Surrogates:									
Nitrobenzene-d5	75 %	36-98	1	04/09/12	kb	04/11/12	avl		
2-Fluorobiphenyl	69 %	44-105	1	04/09/12	kb	04/11/12	avl		
Terphenyl-d14	71 %	46-109	1	04/09/12	kb	04/11/12	avl		
METALS, TOTAL									
Analysis Method: EPA 6010B Batch: T028530									
Barium	1.5 mg/kg dry	1.0	1	04/09/12	ns	04/12/12	jd		
Cadmium	<0.20 mg/kg dry	0.20	1	04/09/12	ns	04/12/12	jd		
Chromium	<2.0 mg/kg dry	2.0	1	04/09/12	ns	04/12/12	jd		
Copper	<1.0 mg/kg dry	1.0	1	04/09/12	ns	04/12/12	jd		
Lead	4.0 mg/kg dry	1.0	1	04/09/12	ns	04/12/12	jd		
Zinc	<1.0 mg/kg dry	1.0	1	04/09/12	ns	04/12/12	jd		
Analysis Method: EPA 6020 Batch: T028530									
Arsenic	0.14 mg/kg dry	0.12	10	04/09/12	ns	04/17/12	jd		
Selenium	<0.39 mg/kg dry	0.39	10	04/09/12	ns	04/17/12	jd		

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<0.10 mg/kg dry

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04/09/12

ns

04/17/12

jd

0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

 Trace ID:
 T12D044-09
 Date Collected:
 04/04/12 14:10
 Matrix:
 Soil

 Sample ID:
 110494GSB-6 (3')
 Date Received:
 04/04/12 16:31
 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

**WET CHEMISTRY** 

**METALS, TOTAL** 

Analysis Method: % Calculation

Batch: T028486

% Solids 98 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-10 Date Collected: 04/04/12 14:25 Matrix: Soil Sample ID: 110494GSB-7 (3') Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/11/12 Chrysene <330 ug/kg dry 1 04/09/12 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 78 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 69 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 70 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 4.3 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 <2.0 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 1.1 mg/kg dry 1 ns jd 1.0 1 04/09/12 04/12/12 Lead 1.9 mg/kg dry 1.0 ns jd 04/09/12 04/12/12 Zinc 3.9 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.40 mg/kg dry 10 04/09/12 ns 04/17/12 jd 0.11 Selenium <0.38 mg/kg dry 10 04/09/12 04/17/12 jd ns 0.38

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<0.10 mg/kg dry

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10

04/09/12

ns

04/17/12

jd

0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-10 Date Collected: 04/04/12 14:25 Matrix: Soil

Sample ID: 110494GSB-7 (3') Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028486

% Solids 99 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-11 Date Collected: 04/04/12 14:45 Matrix: Soil Sample ID: 110494GSB-8 Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/11/12 Chrysene <330 ug/kg dry 1 04/09/12 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 87 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 80 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 81 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 5.6 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 2.1 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 1.0 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.7 mg/kg dry 1 04/09/12 jd 1.0 ns Zinc 04/09/12 04/12/12 4.4 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028530 10 04/09/12 04/17/12 Arsenic 0.43 mg/kg dry 0.12 ns jd Selenium <0.39 mg/kg dry 10 04/09/12 04/17/12 jd 0.39 ns

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<0.10 mg/kg dry

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0.10

10

04/09/12

ns

04/17/12

jd



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-11 Date Collected: 04/04/12 14:45 Matrix: Soil

Sample ID: 110494GSB-8 Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028530

Mercury  $< 0.050 \text{ mg/kg dry} \qquad 0.050 \qquad 1 \qquad 04/09/12 \qquad \text{ns} \qquad 04/10/12 \qquad \text{jd}$ 

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028486

% Solids 100 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-12 Date Collected: 04/04/12 15:40 Matrix: Soil Sample ID: 110494GSB-9 Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was 50 was <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 100 was

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-12 Date Collected: 04/04/12 15:40 Matrix: Soil

1ace ID. 112D044-12			Jollectea.	04/04/12 15.4		Matrix.	3011		
Sample ID: 110494GSB-9		Date F	Received:	04/04/12 16:3	31				
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
OLATILE ORGANIC COMPOUNDS	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1.2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	• • • • • • • • • • • • • • • • • • • •	
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	14	
Naphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<250 ug/kg dry		50	04/09/12	was	04/09/12	was	14	
	<330 ug/kg dry	250	50	04/09/12	was	04/09/12	was	N	
2-Methylnaphthalene	~550 ug/kg ury	330	30	04/03/12	was	U <del>1</del> /U3/12	was	IN	
Surrogates: 1,2-Dichloroethane-d4	92 %	68-133	50	04/09/12	was	04/09/12	was		
Toluene-d8	96 %	75-120	50	04/09/12	was	04/09/12	was		

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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID:         T12D044-12           Sample ID:         110494GSB-9			Collected: Received:	04/04/12 15:4 04/04/12 16:3		Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUN	IDS BY GC-MS								
4-Bromofluorobenzene	89 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	83 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COM	POUNDS BY GC-MS								
<u>Analysis Method: EPA 8270C</u> Batch: T028525									
Naphthalene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Acenaphthylene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Acenaphthene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Fluorene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Phenanthrene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Anthracene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Fluoranthene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Pyrene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Chrysene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	2	04/09/12	kb	04/11/12	avl		
Surrogates:									
Nitrobenzene-d5	97 %	36-98	2	04/09/12	kb	04/11/12	avl		
2-Fluorobiphenyl	88 %	44-105	2	04/09/12	kb	04/11/12	avl		

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88 %

46-109

04/09/12

kb

04/11/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-12 Date Collected: 04/04/12 15:40 Matrix: Soil Sample ID: 110494GSB-9 Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 Barium 04/09/12 04/12/12 14 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/09/12 ns 04/12/12 jd 0.20 Chromium 04/09/12 04/12/12 3.2 mg/kg dry 1 jd 2.0 ns Copper 2.1 mg/kg dry 04/09/12 ns 04/12/12 jd 1.0 Lead 7.5 mg/kg dry 1.0 04/09/12 ns 04/12/12 jd Zinc 11 mg/kg dry 1.0 1 04/09/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.84 mg/kg dry 0.12 10 04/09/12 ns 04/13/12 jd Selenium 10 04/09/12 04/11/12 <0.39 mg/kg dry jd 0.39 ns Silver <0.10 mg/kg dry 10 04/09/12 04/13/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028530 Mercury <0.050 mg/kg dry 04/09/12 04/10/12 jd 0.050 ns **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028486 % Solids 95 % by Wt. 04/05/12 04/05/12 Ν 0.10 as bd

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-13 Date Collected: 04/04/12 15:55 Matrix: Soil Sample ID: 110494GSB-10 Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY ANALYZED BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 04/11/12 kb avl 330 Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/11/12 Chrysene <330 ug/kg dry 1 04/09/12 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 83 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 78 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 92 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 5.0 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/12/12 2.1 mg/kg dry 1 04/09/12 ns jd 2.0 <1.0 mg/kg dry 04/09/12 04/12/12 jd Copper 1.0 1 ns <1.0 mg/kg dry 1 04/09/12 04/12/12 jd Lead 1.0 ns 04/12/12 Zinc 04/09/12 3.5 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.39 mg/kg dry 10 04/09/12 ns 04/17/12 jd 0.12 <0.39 mg/kg dry 10 04/09/12 04/17/12 jd Selenium ns 0.39

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<0.10 mg/kg dry

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0.10

10

04/09/12

ns

04/17/12

jd



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-13 Date Collected: 04/04/12 15:55 Matrix: Soil

Sample ID: 110494GSB-10 Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

**WET CHEMISTRY** 

Analysis Method: % Calculation

Batch: T028486

% Solids 100 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-14 Date Collected: 04/04/12 16:20 Matrix: Soil Sample ID: 110494GSB-11 Date Received: 04/04/12 16:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY ANALYZED BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS 407 Analysis Method: EPA 8270C Batch: T028525 Naphthalene <440 ug/kg dry 5 04/09/12 kb 04/12/12 avl 440 <440 ug/kg dry 5 04/09/12 04/12/12 2-Methylnaphthalene 440 kb avl 04/09/12 04/12/12 Acenaphthylene <440 ug/kg dry 5 kb avl 440 5 04/09/12 04/12/12 Acenaphthene <440 ug/kg dry kb avl 440 5 04/09/12 04/12/12 Fluorene <440 ug/kg dry kb avl 440 Phenanthrene <330 ug/kg dry 5 04/09/12 kb 04/12/12 avl 330 Anthracene <440 ug/kg dry 5 04/09/12 04/12/12 440 kb avl Fluoranthene <330 ug/kg dry 5 04/09/12 kb 04/12/12 330 avl Pyrene <440 ug/kg dry 5 04/09/12 kb 04/12/12 440 avl Benzo (a) anthracene <330 ug/kg dry 5 04/09/12 kb 04/12/12 avl 330 5 04/12/12 Chrysene <330 ug/kg dry 04/09/12 kb avl 330 04/09/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 5 kb avl 330 5 04/09/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry kb avl 330 5 04/09/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry kb avl 330 5 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 04/09/12 kh 04/12/12 avl <330 ug/kg dry 5 04/09/12 04/12/12 Dibenz (a,h) anthracene 330 kb avl 04/12/12 <330 ug/kg dry 5 04/09/12 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 79 % 36-98 5 04/09/12 kb 04/12/12 avl 2-Fluorobiphenyl 69 % 44-105 5 04/09/12 kb 04/12/12 avl Terphenyl-d14 76 % 46-109 5 04/09/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 7.9 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 <2.0 mg/kg dry 1 ns jd 2.0 <1.0 mg/kg dry 04/09/12 04/12/12 Copper 1 ns jd 1.0 4.5 mg/kg dry 1 04/09/12 04/12/12 Lead 1.0 ns jd 04/09/12 04/12/12 Zinc 5.2 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.49 mg/kg dry 10 04/09/12 ns 04/17/12 jd 0.11 <0.38 mg/kg dry 10 04/09/12 04/17/12 jd Selenium ns 0.38

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<0.10 mg/kg dry

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10

04/09/12

ns

04/17/12

jd

0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-14 Date Collected: 04/04/12 16:20 Matrix: Soil

Sample ID: 110494GSB-11 Date Received: 04/04/12 16:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028530

Mercury  $< 0.050 \text{ mg/kg dry} \qquad 0.050 \qquad 1 \qquad 04/09/12 \quad \text{ns} \qquad 04/10/12 \quad \text{jd}$ 

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028486

% Solids 94 % by Wt. 0.10 1 04/05/12 as 04/05/12 bd N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-15 Date Collected: 04/04/12 Matrix: Soil

Sample ID: 110494M-1S Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether 04/09/12 04/09/12 Ν <250 ug/kg dry 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was 50 was <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 100 was

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-15 Date Collected: 04/04/12 Matrix: Soil Sample ID: 110494M-1S Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/09/12 04/09/12 trans-1,3-Dichloropropene <50 ug/kg dry 50 50 was was 50 04/09/12 04/09/12 1,1,2-Trichloroethane <50 ug/kg dry 50 was was Tetrachloroethene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was 2-Hexanone <2500 ug/kg dry 50 04/09/12 04/09/12 2500 was was Dibromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 100 was was 1,2-Dibromoethane (EDB) <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 50 04/09/12 Chlorobenzene <50 ug/kg dry was 04/09/12 was 50 50 04/09/12 04/09/12 1,1,1,2-Tetrachloroethane <100 ug/kg dry 100 was was 50 04/09/12 04/09/12 Ethylbenzene <50 ug/kg dry was was 50 50 04/09/12 04/09/12 m,p-Xylene <100 ug/kg dry 100 was was Ν 50 04/09/12 04/09/12 o-Xylene <50 ug/kg dry 50 was was Ν 50 04/09/12 04/09/12 Xylenes, total <150 ug/kg dry 150 was was Ν 04/09/12 04/09/12 50 Styrene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 <100 ug/kg dry Bromoform 100 was was 50 04/09/12 04/09/12 <250 ug/kg dry Isopropylbenzene 250 was was 1,1,2,2-Tetrachloroethane <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 50 04/09/12 04/09/12 1,2,3-Trichloropropane <100 ug/kg dry was 100 was 04/09/12 trans-1,4-Dichloro-2-butene 50 04/09/12 <50 ug/kg dry 50 was was Bromobenzene <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 50 04/09/12 04/09/12 n-Propylbenzene <100 ug/kg dry 100 was was 1,3,5-Trimethylbenzene <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 <50 ug/kg dry 50 04/09/12 04/09/12 t-Butyl Benzene was was 50 1,2,4-Trimethylbenzene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 sec-Butylbenzene <50 ug/kg dry was was 50 p-Isopropyltoluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 1,3-Dichlorobenzene <100 ug/kg dry was was 100 1,4-Dichlorobenzene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 n-Butylbenzene <50 ug/kg dry was was 50 50 04/09/12 04/09/12 1,2,3-Trimethylbenzene <50 ug/kg dry 50 was was Ν <100 ug/kg dry 50 04/09/12 04/09/12 1,2-Dichlorobenzene 100 was was 1,2-Dibromo-3-chloropropane <100 ug/kg dry 50 04/09/12 04/09/12 100 was was Hexachloroethane <100 ug/kg dry 50 04/09/12 04/09/12 Ν 100 was was 1,2,4-Trichlorobenzene <330 ug/kg dry 50 04/09/12 04/09/12 330 was was Naphthalene <330 ug/kg dry 50 04/09/12 was 04/09/12 Ν 330 was 1,2,3-Trichlorobenzene <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 50 04/09/12 04/09/12 2-Methylnaphthalene <330 ug/kg dry was was Ν 330 Surrogates: 1,2-Dichloroethane-d4 92 % 68-133 50 04/09/12 was 04/09/12 was

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99 %

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75-120

50

04/09/12

was

04/09/12

was

Toluene-d8



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Frace ID: T12D044-15 Sample ID: 110494M-1S			Collected: Received:	04/04/12 04/04/12 16:	31	Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
VOLATILE ORGANIC COMPOUN	IDS BY GC-MS								
4-Bromofluorobenzene	89 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	83 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COM	IPOUNDS BY GC-MS								
Analysis Method: EPA 8270C Batch: T028525									
Naphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/09/12	kb	04/12/12	avl		
Surrogates:									
Nitrobenzene-d5	81 %	36-98	1	04/09/12	kb	04/12/12	avl		
2-Fluorobiphenyl	74 %	44-105	1	04/09/12	kb	04/12/12	avl		
Terphenyl-d14	82 %	46-109	1	04/09/12	kb	04/12/12	avl		

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-15 Date Collected: 04/04/12 Matrix: Soil Sample ID: 110494M-1S Date Received: 04/04/12 16:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 Barium 04/09/12 04/12/12 8.5 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/09/12 ns 04/12/12 jd 0.20 Chromium 04/09/12 04/12/12 2.6 mg/kg dry 1 jd 2.0 ns Copper <1.0 mg/kg dry 04/09/12 ns 04/12/12 jd 1.0 Lead 1.8 mg/kg dry 1.0 04/09/12 ns 04/12/12 jd Zinc 6.4 mg/kg dry 1.0 04/09/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.46 mg/kg dry 0.12 10 04/09/12 ns 04/17/12 jd 10 04/09/12 04/17/12 Selenium <0.40 mg/kg dry jd 0.40 ns <0.10 mg/kg dry 10 04/09/12 04/17/12 Silver jd ns 0.10 Analysis Method: EPA 7471A Batch: T028530 Mercury <0.050 mg/kg dry 04/09/12 04/10/12 0.050 ns jd **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028486 % Solids 99 % by Wt. 04/05/12 04/05/12 Ν 0.10 as bd

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

T12D044-16 Trace ID: Date Collected: 04/04/12 Matrix: Water Sample ID: Trip Blank #2 Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028561 Dichlorodifluoromethane <5.0 ug/L 5.0 1 04/09/12 was 04/09/12 was 04/09/12 04/09/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/09/12 04/09/12 Vinyl chloride <1.0 ug/L was was 1.0 04/09/12 04/09/12 Bromomethane <5.0 ug/L was was 5.0 04/09/12 04/09/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/09/12 04/09/12 <1.0 ug/L was was 1.0 Diethyl ether <10 ug/L 04/09/12 04/09/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/09/12 04/09/12 Ν 50 was was 1,1-Dichloroethene <1.0 ug/L 04/09/12 04/09/12 1.0 was was Acetone <50 ug/L 1 04/09/12 was 04/09/12 was 50 04/09/12 04/09/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/09/12 04/09/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/09/12 04/09/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/09/12 04/09/12 Methylene chloride <5.0 ug/L 1 was was 5.0 Acrylonitrile <2.0 ug/L 2.0 1 04/09/12 was 04/09/12 was <1.0 ug/L 04/09/12 04/09/12 trans-1,2-Dichloroethene 1.0 1 was was 04/09/12 04/09/12 <1.0 ug/L 1,1-Dichloroethane 1.0 1 was was <5.0 ug/L 04/09/12 04/09/12 Diisopropyl Ether 5.0 1 was was Ν 04/09/12 04/09/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/09/12 04/09/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/09/12 t-Butyl Ethyl Ether 04/09/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/09/12 04/09/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/09/12 04/09/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/09/12 04/09/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/09/12 04/09/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/09/12 was 04/09/12 was 1.0 04/09/12 Benzene <1.0 ug/L was 04/09/12 was 1.0 t-Amyl Methyl Ether <5.0 ug/L 04/09/12 was 04/09/12 was Ν 5.0 04/09/12 04/09/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/09/12 was 04/09/12 was Ν 5.0 Trichloroethene <1.0 ug/L 1.0 04/09/12 was 04/09/12 was 1,2-Dichloropropane <1.0 ug/L 04/09/12 was 04/09/12 was 1.0 <5.0 ug/L 04/09/12 04/09/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <1.0 ug/L 04/09/12 04/09/12 1.0 1 was was 4-Methyl-2-pentanone <50 ug/L 50 04/09/12 was 04/09/12 was

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<1.0 ug/L

1.0

04/09/12

1

was

04/09/12

was

Toluene



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

race ID: T12D044-16 ample ID: Trip Blank #2			Collected: Received:	04/04/12 04/05/12 15:3	11	Matrix:	Water		
· ·	DECLII TO LIMITO	RDL	DILUTION		BY	ANALYZED	DV	NOTES	MC
ARAMETERS	RESULTS UNITS	- RDL	DILUTION	PREPARED	ы	ANALTZED	BY	NOTES	IVIC
OLATILE ORGANIC COMPOUNDS			4	04/00/40		04/00/40			
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
2-Hexanone	<50 ug/L	50	1	04/09/12	was	04/09/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/09/12	was	04/09/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/09/12	was	04/09/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
Surrogates:									
1,2-Dichloroethane-d4	100 %	68-133	1	04/09/12	was	04/09/12	was		
Toluene-d8	97 %	75-120	1	04/09/12	was	04/09/12	was		

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-16 Sample ID: Trip Blank #2		Collected:	04/04/12 Matrix: \( \text{04/05/12 15:31} \)				Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE ORGANIC COMPOUNDS E	BY GC-MS								
4-Bromofluorobenzene	83 %	69-119	1	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	76 %	72-127	1	04/09/12	was	04/09/12	was		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-17 Date Collected: 04/04/12 16:50 Matrix: Soil Sample ID: 110494GSB-12 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/09/12 04/11/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 79 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 73 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 77 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 6.5 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 3.2 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 1.3 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 2.5 mg/kg dry 1 04/09/12 jd 1.0 ns Zinc 04/09/12 04/12/12 8.1 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028530 10 04/09/12 04/17/12 Arsenic 0.43 mg/kg dry 0.12 ns jd Selenium <0.39 mg/kg dry 10 04/09/12 04/17/12 jd 0.39 ns

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<0.10 mg/kg dry

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0.10

10

04/09/12

ns

04/17/12

jd



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-17 Date Collected: 04/04/12 16:50 Matrix: Soil

Sample ID: 110494GSB-12 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 97 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-18 Date Collected: 04/04/12 17:05 Matrix: Soil Sample ID: 110494GSB-13 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 Naphthalene <330 ug/kg dry 2 04/09/12 kb 04/12/12 avl 330 <330 ug/kg dry 2 04/09/12 04/12/12 2-Methylnaphthalene kb avl 330 2 04/09/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 2 04/09/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 2 04/09/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 2 04/09/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 2 04/09/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 2 04/09/12 kb 04/12/12 avl 330 Pyrene <330 ug/kg dry 2 04/09/12 kb 04/12/12 330 avl Benzo (a) anthracene <330 ug/kg dry 2 04/09/12 kb 04/12/12 avl 330 2 04/12/12 Chrysene <330 ug/kg dry 04/09/12 kb avl 330 2 04/09/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry kb avl 330 2 04/09/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry kb avl 330 2 04/09/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry kb avl 330 2 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 04/09/12 kh 04/12/12 avl <330 ug/kg dry 2 04/09/12 04/12/12 Dibenz (a,h) anthracene 330 kb avl 2 04/09/12 04/12/12 <330 ug/kg dry Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 82 % 36-98 2 04/09/12 kb 04/12/12 avl 2-Fluorobiphenyl 80 % 44-105 2 04/09/12 kb 04/12/12 avl Terphenyl-d14 77 % 46-109 2 04/09/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 9.2 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 3.4 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 2.5 mg/kg dry 1.0 1 ns jd 04/09/12 04/12/12 Lead 12 mg/kg dry 1 jd 1.0 ns Zinc 04/09/12 04/12/12 12 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028530 10 04/09/12 04/17/12 Arsenic 1.0 mg/kg dry ns jd 0.11 Selenium <0.38 mg/kg dry 10 04/09/12 04/17/12 jd 0.38 ns

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<0.10 mg/kg dry

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0.10

10

04/09/12

ns

04/17/12

jd



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-18 Date Collected: 04/04/12 17:05 Matrix: Soil

Sample ID: 110494GSB-13 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028530

Mercury  $<0.050 \text{ mg/kg dry} \qquad 0.050 \qquad 1 \qquad 04/09/12 \quad \text{ns} \qquad 04/10/12 \quad \text{jd}$ 

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 97 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-19 Date Collected: 04/04/12 17:30 Matrix: Soil Sample ID: 110494GSB-14 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 2 04/09/12 kb avl 330 <330 ug/kg dry 2 04/09/12 04/11/12 2-Methylnaphthalene kb avl 330 2 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 2 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 2 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 2 04/09/12 04/11/12 kb avl 330 Pyrene <330 ug/kg dry 2 04/09/12 kb 04/11/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 2 04/09/12 kb 04/11/12 avl 330 2 04/11/12 Chrysene <330 ug/kg dry 04/09/12 kb avl 330 2 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry kb avl 330 2 04/11/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 04/09/12 kh avl <330 ug/kg dry 2 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 kb avl 2 04/09/12 04/11/12 <330 ug/kg dry Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 90 % 36-98 2 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 86 % 44-105 2 04/09/12 kb 04/11/12 avl Terphenyl-d14 91 % 46-109 2 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 6.2 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 3.1 mg/kg dry 1 ns jd 2.0 04/09/12 04/12/12 Copper 1.5 mg/kg dry 1.0 1 ns jd 04/09/12 04/12/12 Lead 7.7 mg/kg dry 1 jd 1.0 ns Zinc 04/09/12 04/12/12 7.1 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028530 10 04/09/12 04/17/12 Arsenic 0.61 mg/kg dry 0.12 ns jd

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<0.39 mg/kg dry

<0.10 mg/kg dry

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0.39

0.10

10

10

04/09/12

04/09/12

ns

ns

04/17/12

04/17/12

jd

jd

Selenium



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-19 Date Collected: 04/04/12 17:30 Matrix: Soil

Sample ID: 110494GSB-14 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028530

Mercury  $< 0.050 \text{ mg/kg dry} \qquad 0.050 \qquad 1 \qquad 04/09/12 \qquad \text{ns} \qquad 04/10/12 \qquad \text{jd}$ 

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 98 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-20 Date Collected: 04/04/12 18:00 Matrix: Soil

Sample ID: 110494GSB-15 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028582 Dichlorodifluoromethane <250 ug/kg dry 50 04/10/12 was 04/10/12 was 250 Chloromethane <250 ug/kg dry 04/10/12 04/10/12 50 was was 250 04/10/12 04/10/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/10/12 04/10/12 Bromomethane <200 ug/kg dry was was 200 50 04/10/12 04/10/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/10/12 04/10/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/10/12 04/10/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/10/12 04/10/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/10/12 04/10/12 50 was was Acetone <1000 ug/kg dry 50 04/10/12 was 04/10/12 was 1000 50 04/10/12 04/10/12 lodomethane <100 ug/kg dry was was Ν 100 04/10/12 04/10/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/10/12 04/10/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/10/12 04/10/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry 04/10/12 Acrylonitrile 100 50 04/10/12 was was Ν 50 04/10/12 04/10/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/10/12 04/10/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/10/12 04/10/12 Diisopropyl Ether 250 was was Ν 50 04/10/12 04/10/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/10/12 04/10/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 04/10/12 t-Butyl Ethyl Ether <250 ug/kg dry 50 04/10/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/10/12 04/10/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/10/12 04/10/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/10/12 04/10/12 was was 50 1.1.1-Trichloroethane <50 ug/kg dry 50 04/10/12 04/10/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 04/10/12 Benzene <50 ug/kg dry 50 was 04/10/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/10/12 was 04/10/12 was Ν 250 04/10/12 04/10/12 1,2-Dichloroethane <50 ug/kg dry 50 was was 50 Cyclohexane <250 ug/kg dry 50 04/10/12 was 04/10/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 <250 ug/kg dry 50 04/10/12 04/10/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/10/12 was 04/10/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/10/12 04/10/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/10/12 was 04/10/12 was Toluene <100 ug/kg dry 50 04/10/12 was 04/10/12 100 was

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

fample ID: 110494GSB-15 (3')		Date Received:		04/05/12 15:31					
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
OLATILE ORGANIC COMPOUNDS	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/10/12	was	04/10/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/10/12	was	04/10/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
Bromoform	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/10/12	was	04/10/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/10/12	was	04/10/12	was	N	
1,2-Dichlorobenzene	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/10/12	was	04/10/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/10/12	was	04/10/12	was		
Naphthalene	<330 ug/kg dry	330	50	04/10/12	was	04/10/12	was	N	
1,2,3-Trichlorobenzene	<250 ug/kg dry	250	50	04/10/12	was	04/10/12	was		
2-Methylnaphthalene	<330 ug/kg dry	330	50	04/10/12	was	04/10/12	was	N	
Surrogates:		-00							
1,2-Dichloroethane-d4	104 %	68-133	50	04/10/12	was	04/10/12	was		
Toluene-d8	98 %	75-120	50	04/10/12	was	04/10/12	was		

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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-20 Sample ID: 110494GSB-15 (3')		Date Collected: Date Received:		04/04/12 18:00 04/05/12 15:31		Matrix: Soil			
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUNDS	BY GC-MS								
4-Bromofluorobenzene	81 %	69-119	50	04/10/12	was	04/10/12	was		
1,2-Dichlorobenzene-d4	113 %	72-127	50	04/10/12	was	04/10/12	was		
SEMI-VOLATILE ORGANIC COMPO	UNDS BY GC-MS								
<u>Analysis Method: EPA 8270C</u> Batch: T028525									
Naphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/09/12	kb	04/11/12	avl		
Surrogates:									
Nitrobenzene-d5	76 %	36-98	1	04/09/12	kb	04/11/12	avl		
2-Fluorobiphenyl	71 %	44-105	1	04/09/12	kb	04/11/12	avl		

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76 %

46-109

04/09/12

kb

04/11/12

avl

Terphenyl-d14



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-20 Date Collected: 04/04/12 18:00 Matrix: Soil Sample ID: 110494GSB-15 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 Barium 04/09/12 04/12/12 12 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/09/12 ns 04/12/12 jd 0.20 Chromium 04/09/12 04/12/12 3.2 mg/kg dry 1 jd 2.0 ns Copper 1.8 mg/kg dry 04/09/12 ns 04/12/12 jd 1.0 Lead 4.8 mg/kg dry 1.0 04/09/12 ns 04/12/12 jd Zinc 14 mg/kg dry 1.0 1 04/09/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028530 04/17/12 Arsenic 0.73 mg/kg dry 0.11 10 04/09/12 ns jd Selenium 10 04/09/12 04/17/12 <0.38 mg/kg dry jd 0.38 ns Silver <0.10 mg/kg dry 10 04/09/12 04/17/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028530 Mercury <0.050 mg/kg dry 04/09/12 04/10/12 jd 0.050 ns **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028513 % Solids 96 % by Wt. 04/06/12 04/06/12 Ν 0.10 as

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-21 Date Collected: 04/04/12 18:25 Matrix: Soil Sample ID: 110494GSB-16 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/09/12 04/11/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 54 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 51 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 55 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 **Barium** 2.2 mg/kg dry 1 04/09/12 ns 04/12/12 jd 1.0 04/09/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/09/12 04/12/12 2.1 mg/kg dry 1 ns jd 2.0 <1.0 mg/kg dry 04/09/12 04/12/12 jd Copper 1.0 1 ns <1.0 mg/kg dry 1 04/09/12 04/12/12 jd Lead 1.0 ns 04/12/12 Zinc 04/09/12 2.3 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028530 Arsenic 0.35 mg/kg dry 10 04/09/12 ns 04/17/12 jd 0.11 <0.37 mg/kg dry 10 04/09/12 04/17/12 jd Selenium ns 0.37

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<0.10 mg/kg dry

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10

04/09/12

ns

04/17/12

jd

0.10



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-21 Date Collected: 04/04/12 18:25 Matrix: Soil

Sample ID: 110494GSB-16 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028530

Mercury <0.050 mg/kg dry 0.050 1 04/09/12 ns 04/10/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 81 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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96 % by Wt.

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

**WET CHEMISTRY** 

% Solids

<u>Analysis Method: % Calculation</u> Batch: T028513

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-22 Date Collected: 04/04/12 18:45 Matrix: Soil Sample ID: 110494GSB-17 (1') Date Received: 04/05/12 15:31 **RESULTS UNITS PARAMETERS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028530 <1.0 mg/kg dry 04/09/12 04/12/12 Lead 1 jd 1.0 ns Zinc 04/09/12 04/12/12 3.1 mg/kg dry ns jd 1.0

0.10

04/06/12

as

04/06/12

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96 % by Wt.

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

<u>Analysis Method: % Calculation</u> Batch: T028513

% Solids

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-23 Date Collected: 04/04/12 18:55 Matrix: Soil Sample ID: 110494GSB-18 (1') Date Received: 04/05/12 15:31 **RESULTS UNITS PARAMETERS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 <1.0 mg/kg dry 04/10/12 04/12/12 Lead 1 jd 1.0 ns Zinc 04/10/12 04/12/12 2.0 mg/kg dry ns jd 1.0 **WET CHEMISTRY** 

0.10

04/06/12

as

04/06/12

Ν

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-24 Date Collected: 04/04/12 19:05 Matrix: Water Sample ID: 110494EB-1S Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028561 Dichlorodifluoromethane <5.0 ug/L 5.0 1 04/09/12 was 04/09/12 was 04/09/12 04/09/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/09/12 04/09/12 Vinyl chloride <1.0 ug/L was was 1.0 04/09/12 04/09/12 Bromomethane <5.0 ug/L was was 5.0 04/09/12 04/09/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/09/12 04/09/12 <1.0 ug/L was was 1.0 Diethyl ether <10 ug/L 04/09/12 04/09/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/09/12 04/09/12 Ν 50 was was 1,1-Dichloroethene <1.0 ug/L 04/09/12 04/09/12 1.0 was was Acetone <50 ug/L 1 04/09/12 was 04/09/12 was 50 04/09/12 04/09/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/09/12 04/09/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/09/12 04/09/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/09/12 04/09/12 Methylene chloride <5.0 ug/L 1 was was 5.0 Acrylonitrile <2.0 ug/L 2.0 1 04/09/12 was 04/09/12 was 04/09/12 04/09/12 trans-1,2-Dichloroethene <1.0 ug/L 1.0 1 was was 04/09/12 04/09/12 <1.0 ug/L 1,1-Dichloroethane 1.0 1 was was <5.0 ug/L 04/09/12 04/09/12 Diisopropyl Ether 5.0 1 was was Ν 04/09/12 04/09/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/09/12 04/09/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/09/12 t-Butyl Ethyl Ether 04/09/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/09/12 04/09/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/09/12 04/09/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/09/12 04/09/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/09/12 04/09/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/09/12 was 04/09/12 was 1.0 04/09/12 Benzene <1.0 ug/L was 04/09/12 was 1.0 t-Amyl Methyl Ether <5.0 ug/L 04/09/12 was 04/09/12 was Ν 5.0 04/09/12 04/09/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/09/12 was 04/09/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/09/12 was 04/09/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/09/12 was 04/09/12 was 1.0 <5.0 ug/L 04/09/12 04/09/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/09/12 04/09/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 04/09/12 was 04/09/12 was

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<1.0 ug/L

1.0

04/09/12

1

was

04/09/12

was

Toluene



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-24 Sample ID: 110494EB-1S			Date Collected: Date Received:		04/04/12 19:05 04/05/12 15:31		Matrix: Water			
ARAMETERS		RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
OLATILE ORGA	ANIC COMPOUNDS									
trans-1,3-Dichlo	ropropene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1,2-Trichloroet	thane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Tetrachloroethe	ne	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
2-Hexanone		<50 ug/L	50	1	04/09/12	was	04/09/12	was		
Dibromochlorom	nethane	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,2-Dibromoetha	ane (EDB)	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Chlorobenzene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachle	oroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Ethylbenzene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
m,p-Xylene		<2.0 ug/L	2.0	1	04/09/12	was	04/09/12	was	N	
o-Xylene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
Xylenes, total		<3.0 ug/L	3.0	1	04/09/12	was	04/09/12	was	N	
Styrene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromoform		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Isopropylbenzer	ne	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachle	oroethane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,3-Trichloropi	ropane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
trans-1,4-Dichlo	ro-2-butene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Bromobenzene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
n-Propylbenzen	е	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,3,5-Trimethylb	enzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
t-Butyl Benzene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,4-Trimethylb	enzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
sec-Butylbenzer	ne	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
p-Isopropyltolue	ne	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
1,3-Dichloroben	zene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,4-Dichloroben	zene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
n-Butylbenzene		<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2,3-Trimethylb	enzene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was	N	
1,2-Dichloroben:	zene	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-c	chloropropane	<1.0 ug/L	1.0	1	04/09/12	was	04/09/12	was		
Hexachloroetha	ne	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobe	enzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
Naphthalene		<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobe	enzene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was		
2-Methylnaphtha	alene	<5.0 ug/L	5.0	1	04/09/12	was	04/09/12	was	N	
Surrogates:		-								
1,2-Dichloroet	hane-d4	101 %	68-133	1	04/09/12	was	04/09/12	was		
Toluene-d8		100 %	75-120	1	04/09/12	was	04/09/12	was		

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: Sample ID:	T12D044-24 110494EB-1S			Collected: Received:	04/04/12 19: 04/05/12 15:		Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE	ORGANIC COMPOUNDS	S BY GC-MS								
4-Bromo	ofluorobenzene	84 %	69-119	1	04/09/12	was	04/09/12	was		
1,2-Dich	nlorobenzene-d4	76 %	72-127	1	04/09/12	was	04/09/12	was		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-25 Date Collected: 04/04/12 Matrix: Soil Sample ID: 110494M-2S Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY ANALYZED BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 2 04/09/12 kb avl 330 <330 ug/kg dry 2 04/09/12 04/11/12 2-Methylnaphthalene kb avl 330 2 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 2 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 2 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 2 04/09/12 04/11/12 kb avl 330 Pyrene <330 ug/kg dry 2 04/09/12 kb 04/11/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 2 04/09/12 kb 04/11/12 avl 330 2 04/11/12 Chrysene <330 ug/kg dry 04/09/12 kb avl 330 2 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry kb avl 330 2 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry kb avl 330 2 04/11/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 04/09/12 kh avl <330 ug/kg dry 2 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 kb avl 2 04/09/12 04/11/12 <330 ug/kg dry Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 70 % 36-98 2 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 72 % 44-105 2 04/09/12 kb 04/11/12 avl Terphenyl-d14 76 % 46-109 2 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 14 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 4.7 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 3.1 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 13 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 12 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028550 10 04/10/12 04/13/12 Arsenic 1.9 mg/kg dry 0.12 ns jd Selenium <0.39 mg/kg dry 10 04/10/12 04/13/12 jd 0.39 ns

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<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-25 Date Collected: 04/04/12 Matrix: Soil Sample ID: 110494M-2S Date Received: 04/05/12 15:31 **RESULTS UNITS** RDL PREPARED NOTES **PARAMETERS** DILUTION BY ANALYZED BY MCL **METALS, TOTAL** Analysis Method: EPA 7471A Batch: T028550 <0.050 mg/kg dry 04/10/12 04/11/12 jd Mercury 0.050 ns

## **WET CHEMISTRY**

Analysis Method: % Calculation

Batch: T028513

% Solids 97 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-26 Date Collected: 04/05/12 09:10 Matrix: Soil Sample ID: 110494GSB-19 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY ANALYZED BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 Naphthalene <330 ug/kg dry 04/09/12 kb 04/11/12 avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 04/11/12 kb avl 330 Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/11/12 Chrysene <330 ug/kg dry 1 04/09/12 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 68 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 64 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 68 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 3.6 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 <2.0 mg/kg dry 1 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 Copper 1 ns jd 1.0 1 04/10/12 04/12/12 Lead 1.0 mg/kg dry 1.0 ns jd 04/12/12 Zinc 04/10/12 2.4 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028550 Arsenic 0.20 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.12 <0.39 mg/kg dry 10 04/10/12 04/13/12 Selenium ns jd 0.39

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<0.10 mg/kg dry

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10

04/10/12

ns

04/13/12

jd

0.10



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-26 Date Collected: 04/05/12 09:10 Matrix: Soil

Sample ID: 110494GSB-19 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

**METALS, TOTAL** 

Analysis Method: % Calculation

Batch: T028513

% Solids 97 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-27 Date Collected: 04/05/12 09:30 Matrix: Soil Sample ID: 110494GSB-20 (2-1/2') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028525 04/11/12 Naphthalene <330 ug/kg dry 1 04/09/12 kb avl 330 <330 ug/kg dry 04/09/12 04/11/12 2-Methylnaphthalene 1 kb avl 330 04/09/12 04/11/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Acenaphthene <330 ug/kg dry kb avl 330 04/09/12 04/11/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/09/12 04/11/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/09/12 04/11/12 330 kb avl Fluoranthene <330 ug/kg dry 04/09/12 04/11/12 kb avl 330 Pyrene <330 ug/kg dry 04/09/12 kb 04/11/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/09/12 kb 04/11/12 avl 330 04/11/12 Chrysene <330 ug/kg dry 1 04/09/12 kb avl 330 04/09/12 04/11/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/09/12 04/11/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/09/12 kh 04/11/12 avl <330 ug/kg dry 04/09/12 04/11/12 Dibenz (a,h) anthracene 330 1 kb avl 04/09/12 04/11/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 83 % 36-98 1 04/09/12 kb 04/11/12 avl 2-Fluorobiphenyl 74 % 44-105 04/09/12 kb 04/11/12 avl Terphenyl-d14 78 % 46-109 04/09/12 kb 04/11/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 21 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 4.4 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 4.9 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 8.3 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 12 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028550 10 04/10/12 04/13/12 Arsenic 0.88 mg/kg dry ns jd 0.11 Selenium <0.37 mg/kg dry 10 04/10/12 04/13/12 jd 0.37 ns

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0.10

10

04/10/12

ns

04/13/12

jd



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-27 Date Collected: 04/05/12 09:30 Matrix: Soil

Sample ID: 110494GSB-20 (2-1/2') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

**WET CHEMISTRY** 

Analysis Method: % Calculation

Batch: T028513

% Solids 82 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-28 Date Collected: 04/05/12 09:50 Matrix: Soil Sample ID: 110494GSB-21 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028582 Dichlorodifluoromethane <250 ug/kg dry 50 04/10/12 was 04/10/12 was 250 Chloromethane <250 ug/kg dry 04/10/12 04/10/12 50 was was 250 04/10/12 04/10/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/10/12 04/10/12 Bromomethane <200 ug/kg dry was was 200 50 04/10/12 04/10/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/10/12 04/10/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/10/12 04/10/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/10/12 04/10/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/10/12 04/10/12 50 was was Acetone <1000 ug/kg dry 50 04/10/12 was 04/10/12 was 1000 50 04/10/12 04/10/12 lodomethane <100 ug/kg dry was was Ν 100 04/10/12 04/10/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/10/12 04/10/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/10/12 04/10/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry 04/10/12 Acrylonitrile 100 50 04/10/12 was was Ν 50 04/10/12 04/10/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/10/12 04/10/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/10/12 04/10/12 Diisopropyl Ether 250 was was Ν 50 04/10/12 04/10/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/10/12 04/10/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 04/10/12 t-Butyl Ethyl Ether <250 ug/kg dry 50 04/10/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/10/12 04/10/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/10/12 04/10/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/10/12 04/10/12 was 50 was 1.1.1-Trichloroethane <50 ug/kg dry 50 04/10/12 04/10/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 04/10/12 Benzene <50 ug/kg dry 50 was 04/10/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/10/12 was 04/10/12 was Ν 250 04/10/12 04/10/12 1,2-Dichloroethane <50 ug/kg dry 50 was was 50 Cyclohexane <250 ug/kg dry 50 04/10/12 was 04/10/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 <250 ug/kg dry 50 04/10/12 04/10/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/10/12 was 04/10/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/10/12 04/10/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/10/12 was 04/10/12 was Toluene <100 ug/kg dry 50 04/10/12 was 04/10/12 100 was

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-28 Date Collected: 04/05/12 09:50 Matrix: Soil Sample ID: 110494GSB-21 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/10/12 04/10/12 trans-1,3-Dichloropropene <50 ug/kg dry 50 50 was was 50 04/10/12 04/10/12 1,1,2-Trichloroethane <50 ug/kg dry 50 was was Tetrachloroethene <50 ug/kg dry 50 50 04/10/12 was 04/10/12 was 2-Hexanone <2500 ug/kg dry 50 04/10/12 04/10/12 2500 was was Dibromochloromethane <100 ug/kg dry 50 04/10/12 04/10/12 100 was was 1,2-Dibromoethane (EDB) <50 ug/kg dry 50 04/10/12 was 04/10/12 was 50 50 04/10/12 04/10/12 Chlorobenzene <50 ug/kg dry was was 50 04/10/12 04/10/12 1,1,1,2-Tetrachloroethane <100 ug/kg dry 100 50 was was 50 04/10/12 04/10/12 Ethylbenzene <50 ug/kg dry was was 50 50 04/10/12 04/10/12 m,p-Xylene <100 ug/kg dry 100 was was Ν 50 04/10/12 04/10/12 o-Xylene <50 ug/kg dry 50 was was Ν 04/10/12 50 04/10/12 Xylenes, total <150 ug/kg dry 150 was was Ν 04/10/12 04/10/12 50 Styrene <50 ug/kg dry 50 was was 50 04/10/12 04/10/12 <100 ug/kg dry Bromoform 100 was was 50 04/10/12 04/10/12 <250 ug/kg dry Isopropylbenzene 250 was was 04/10/12 1,1,2,2-Tetrachloroethane <50 ug/kg dry 50 04/10/12 50 was was 50 04/10/12 04/10/12 1,2,3-Trichloropropane <100 ug/kg dry was 100 was 04/10/12 04/10/12 trans-1,4-Dichloro-2-butene 50 <50 ug/kg dry 50 was was Bromobenzene <100 ug/kg dry 50 04/10/12 04/10/12 was was 100 50 04/10/12 04/10/12 n-Propylbenzene <100 ug/kg dry 100 was was 1,3,5-Trimethylbenzene <100 ug/kg dry 50 04/10/12 04/10/12 was was 100 <50 ug/kg dry 50 04/10/12 04/10/12 t-Butvl Benzene was was 50 1,2,4-Trimethylbenzene <100 ug/kg dry 50 04/10/12 was 04/10/12 was 100 04/10/12 04/10/12 sec-Butylbenzene <50 ug/kg dry 50 was was 50 p-Isopropyltoluene <100 ug/kg dry 50 04/10/12 was 04/10/12 was 100 50 04/10/12 04/10/12 1,3-Dichlorobenzene <100 ug/kg dry was was 100 1,4-Dichlorobenzene <100 ug/kg dry 50 04/10/12 was 04/10/12 was 100 50 04/10/12 04/10/12 n-Butylbenzene <50 ug/kg dry was was 50 <50 ug/kg dry 50 04/10/12 04/10/12 1,2,3-Trimethylbenzene 50 was was Ν <100 ug/kg dry 50 04/10/12 04/10/12 1,2-Dichlorobenzene 100 was was 1,2-Dibromo-3-chloropropane <100 ug/kg dry 50 04/10/12 04/10/12 100 was was Hexachloroethane <100 ug/kg dry 50 04/10/12 was 04/10/12 Ν 100 was 1,2,4-Trichlorobenzene <330 ug/kg dry 50 04/10/12 04/10/12 330 was was Naphthalene <330 ug/kg dry 50 04/10/12 was 04/10/12 Ν 330 was 1,2,3-Trichlorobenzene <250 ug/kg dry 50 04/10/12 was 04/10/12 was 250

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<330 ug/kg dry

101 %

100 %

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330

68-133

75-120

50

50

50

04/10/12

04/10/12

04/10/12

was

was

was

04/10/12

04/10/12

04/10/12

was

was

was

Ν

2-Methylnaphthalene

1,2-Dichloroethane-d4

Surrogates:

Toluene-d8



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-28 Sample ID: 110494GSB-21 (3')		Date Collected: Date Received:		04/05/12 09:50 04/05/12 15:31		Matrix: Soil			
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUND	S BY GC-MS								
4-Bromofluorobenzene	104 %	69-119	50	04/10/12	was	04/10/12	was		
1,2-Dichlorobenzene-d4	112 %	72-127	50	04/10/12	was	04/10/12	was		
SEMI-VOLATILE ORGANIC COMP Analysis Method: EPA 8270C	OUNDS BY GC-MS								
Batch: T028545				0.440440		0444440			
Naphthalene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/10/12	kb	04/11/12	avl		
Surrogates:									
Nitrobenzene-d5	77 %	36-98	1	04/10/12	kb	04/11/12	avl		
2-Fluorobiphenyl	70 %	44-105	1	04/10/12	kb	04/11/12	avl		

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-28 Date Collected: 04/05/12 09:50 Matrix: Soil Sample ID: 110494GSB-21 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 13 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 3.2 mg/kg dry 1 jd 2.0 ns Copper 1.2 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 1.2 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 7.7 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 04/10/12 Arsenic 0.69 mg/kg dry 0.12 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.39 mg/kg dry jd 0.39 ns Silver <0.10 mg/kg dry 10 04/10/12 04/13/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028550 Mercury <0.050 mg/kg dry 04/10/12 04/11/12 jd 0.050 ns **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028513 % Solids 110 % by Wt. 04/06/12 04/06/12 Ν 0.10 as

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-29 Date Collected: 04/05/12 10:15 Matrix: Soil Sample ID: 110494GSB-22 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 Naphthalene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 04/12/12 kb avl 330 Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 69 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 66 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 75 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 3.3 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 2.1 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.1 mg/kg dry 1.0 1 ns jd 04/10/12 04/12/12 Lead <1.0 mg/kg dry 1 ns jd 1.0 04/12/12 Zinc 04/10/12 2.1 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028550 Arsenic 0.37 mg/kg dry 10 04/10/12 04/13/12 jd 0.11 ns Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.38

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<0.10 mg/kg dry

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10

04/10/12

ns

04/13/12

jd

0.10



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-29 Date Collected: 04/05/12 10:15 Matrix: Soil

Sample ID: 110494GSB-22 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 91 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-30 Date Collected: 04/05/12 10:35 Matrix: Soil Sample ID: 110494GSB-23 (4') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/12/12 Naphthalene <330 ug/kg dry 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 69 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 62 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 65 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 1.1 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 < 2.0 mg/kg dry 1 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 Copper 1 ns jd 1.0 <1.0 mg/kg dry 1 04/10/12 04/12/12 Lead 1.0 ns jd 04/10/12 04/12/12 Zinc 1 jd 2.2 mg/kg dry 1.0 ns Analysis Method: EPA 6020 Batch: T028550 Arsenic 0.21 mg/kg dry 10 04/10/12 04/13/12 jd 0.12 ns Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.38

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<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-30 Date Collected: 04/05/12 10:35 Matrix: Soil

Sample ID: 110494GSB-23 (4') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 96 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-31 Date Collected: 04/05/12 10:55 Matrix: Soil Sample ID: 110494GSB-24 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 Naphthalene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 79 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 73 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 78 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 14 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 6.7 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.2 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.6 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 9.7 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028550 10 04/10/12 04/13/12 Arsenic 0.78 mg/kg dry 0.11 ns jd Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd 0.38 ns

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0.10

10

04/10/12

ns

04/13/12

jd



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-31 Date Collected: 04/05/12 10:55 Matrix: Soil

Sample ID: 110494GSB-24 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

**WET CHEMISTRY** 

Analysis Method: % Calculation

Batch: T028513

% Solids 95 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-32 Date Collected: 04/05/12 11:05 Matrix: Soil

Sample ID: 110494GSB-25 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was was 50 <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-32 Date Collected: 04/05/12 11:05 Matrix: Soil

1ace ID. 112D044-32			Date Collected.		04/05/12 11.05		Matrix. 3011		
Sample ID: 110494GSB-25 (3')		Date F	Date Received:		04/05/12 15:31				
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANIC COMPOUNDS	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	• • • • • • • • • • • • • • • • • • • •	
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry		50	04/09/12		04/09/12		14	
Naphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
·	<250 ug/kg dry	330			was		was	IN	
1,2,3-Trichlorobenzene	<250 ug/kg ary <330 ug/kg dry	250	50 50	04/09/12 04/09/12	was	04/09/12 04/09/12	was	N.	
2-Methylnaphthalene	~sso ug/kg ury	330	00	04/09/12	was	04/09/12	was	N	
Surrogates: 1,2-Dichloroethane-d4	92 %	68-133	50	04/09/12	was	04/09/12	was		
T,2-Dichioroethane-d4 Toluene-d8	92 % 96 %	75-120	50	04/09/12	was	04/09/12	was		

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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-32  Sample ID: 110494GSB-25 (3')		Date Collected: Date Received:		04/05/12 11:05 04/05/12 15:31		Matrix: Soil			
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUNDS I	BY GC-MS								
4-Bromofluorobenzene	89 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	82 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COMPOU	INDS BY GC-MS								
Analysis Method: EPA 8270C Batch: T028545									
Naphthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Acenaphthylene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Acenaphthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Fluorene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Phenanthrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Chrysene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Surrogates:									
Nitrobenzene-d5	79 %	36-98	2	04/10/12	kb	04/12/12	avl		
2-Fluorobiphenyl	73 %	44-105	2	04/10/12	kb	04/12/12	avl		

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75 %

46-109

04/10/12

kb

04/12/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-32 Date Collected: 04/05/12 11:05 Matrix: Soil Sample ID: 110494GSB-25 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 8.9 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 2.7 mg/kg dry 1 jd 2.0 ns Copper 1.5 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 2.4 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 8.8 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 04/10/12 Arsenic 0.49 mg/kg dry 0.11 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.38 mg/kg dry jd 0.38 ns Silver <0.10 mg/kg dry 10 04/10/12 04/13/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028550 Mercury <0.050 mg/kg dry 04/10/12 04/11/12 jd 0.050 ns **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028513 % Solids 98 % by Wt. 04/06/12 04/06/12 Ν 0.10 as



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-33 Date Collected: 04/05/12 11:25 Matrix: Soil

Sample ID: 110494GSB-26 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether 04/09/12 04/09/12 Ν <250 ug/kg dry 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was 50 was <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 100 was



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-33 Date Collected: 04/05/12 11:25 Matrix: Soil

VOLATILE ORGANIC COMPOUNDS BY GC-MS         trans-1,3-Dichloropropene         <50 ug/kg dry	Sample ID: 110494GSB-26 (3')		Date F	Received:	04/05/12 15:3	31				
trans-1,3-Dichloropropene	PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
1,1,2-Tinchloroethane	VOLATILE ORGANIC COMPOUND	DS BY GC-MS								
Ethrachloroethene	trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Chlorobenzene	Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Ethylbenzene	Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m.p. Xylene	1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
c-Xylene         <50 ug/kg dry         50         50         04/09/12         was         04/09/12         was         N           Xylenes, total         <150 ug/kg dry	Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Xylenes, total	m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
Styrene	o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Bromoform	Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Isopropylbenzene	Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene         <50 ug/kg dry         50         50         04/09/12         was         04/09/12         was           Bromobenzene         <100 ug/kg dry	1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene         <50 ug/kg dry         50         50         04/09/12         was         04/09/12         was           Bromobenzene         <100 ug/kg dry	1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Bromobenzene         <100 ug/kg dry         100         50         04/09/12         was         04/09/12         was           n-Propylbenzene         <100 ug/kg dry	trans-1,4-Dichloro-2-butene			50	04/09/12	was	04/09/12	was		
n-Propylbenzene	Bromobenzene	<100 ug/kg dry		50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was 1,2,4-Trimethylbenzene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was 1,2,4-Trimethylbenzene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was sec-Butylbenzene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was p-lsopropyltoluene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was 1,3-Dichlorobenzene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was 1,3-Dichlorobenzene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was 1,4-Dichlorobenzene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was 1,4-Dichlorobenzene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was 1,2,3-Trimethylbenzene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was 1,2,3-Trimethylbenzene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was N 1,2-Dichlorobenzene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was N 1,2-Dibromo-3-chloropropane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was 1,2,2-Trichlorobenzene <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was N 1,2,4-Trichlorobenzene <330 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1,2,3-Trichlorobenzene <250 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1,2,3-Trichlorobenzene <250 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1,2,3-Trichlorobenzene <250 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1,2,3-Trichlorobenzene <330 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1,2,3-Trichlorobenzene <330 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1,2,3-Trichlorobenzene <330 ug/kg dry 330 50 04/09/12 was 04/09/12 was N 1	n-Propylbenzene	<100 ug/kg dry		50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	• •			50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene       <100 ug/kg dry	t-Butyl Benzene			50	04/09/12	was	04/09/12	was		
sec-Butylbenzene         <50 ug/kg dry         50         50         04/09/12         was         04/09/12         was           p-Isopropyltoluene         <100 ug/kg dry	·			50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	•	·			04/09/12	was		was		
1,3-Dichlorobenzene       <100 ug/kg dry	•				04/09/12					
1,4-Dichlorobenzene       <100 ug/kg dry										
n-Butylbenzene       <50 ug/kg dry       50       50       04/09/12       was       04/09/12       was         1,2,3-Trimethylbenzene       <50 ug/kg dry										
1,2,3-Trimethylbenzene       <50 ug/kg dry										
1,2-Dichlorobenzene       <100 ug/kg dry	•								N	
1,2-Dibromo-3-chloropropane       <100 ug/kg dry	, ,									
Hexachloroethane       <100 ug/kg dry										
1,2,4-Trichlorobenzene       <330 ug/kg dry									N	
Naphthalene       <330 ug/kg dry										
1,2,3-Trichlorobenzene       <250 ug/kg dry									N	
2-Methylnaphthalene <330 ug/kg dry 330 50 04/09/12 was 04/09/12 was N <b>Surrogates:</b>	•								• •	
Surrogates:		0 0 ,							N	
•		ooo agmg ary	550	50	J JOI 12		5 50/ IL			
1.2-DICHOLOGIIGHE-U4 34 /0 00-100 00-100 U7/00/12 Was 07/00/12 Was	1,2-Dichloroethane-d4	94 %	68-133	50	04/09/12	was	04/09/12	was		
Toluene-d8 98 % 75-120 50 04/09/12 was 04/09/12 was										



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-33 Sample ID: 110494GSB-26 (3')			Collected: Received:	04/05/12 11:2 04/05/12 15:3		Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE ORGANIC COMPOUN	DS BY GC-MS								
4-Bromofluorobenzene	91 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	86 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COMI	POUNDS BY GC-MS								
<u>Analysis Method: EPA 8270C</u> Batch: T028545									
Naphthalene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Surrogates:									
Nitrobenzene-d5	74 %	36-98	1	04/10/12	kb	04/12/12	avl		
2-Fluorobiphenyl	70 %	44-105	1	04/10/12	kb	04/12/12	avl		

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77 %

46-109

04/10/12

kb

04/12/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-33 Date Collected: 04/05/12 11:25 Matrix: Soil Sample ID: 110494GSB-26 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 13 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 3.6 mg/kg dry 1 jd 2.0 ns 1.4 mg/kg dry Copper 04/10/12 ns 04/12/12 jd 1.0 Lead 1.2 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 6.8 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 04/10/12 Arsenic 0.65 mg/kg dry 0.11 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.37 mg/kg dry jd 0.37 ns Silver <0.10 mg/kg dry 04/10/12 04/13/12 10 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028550 Mercury <0.050 mg/kg dry 04/10/12 04/11/12 jd 0.050 ns **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028513 % Solids 95 % by Wt. 04/06/12 04/06/12 Ν 0.10 as



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-34 Date Collected: 04/05/12 13:25 Matrix: Soil Sample ID: 110494GSB-27 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 Naphthalene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 04/12/12 kb avl 330 <330 ug/kg dry 04/10/12 kb 04/12/12 Pyrene 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 59 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 54 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 53 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 12 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 3.3 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.6 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.1 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 10 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028550 10 04/10/12 04/13/12 Arsenic 0.68 mg/kg dry ns jd 0.11 Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd 0.38 ns

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<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-34 Date Collected: 04/05/12 13:25 Matrix: Soil

Sample ID: 110494GSB-27 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

Analysis Method: EPA 7471A

**METALS, TOTAL** 

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 96 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-35 Date Collected: 04/05/12 13:40 Matrix: Soil Sample ID: 110494GSB-28 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY ANALYZED BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 Naphthalene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 04/12/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 04/12/12 kb avl 330 Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 73 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 66 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 65 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 8.2 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/12/12 2.3 mg/kg dry 1 04/10/12 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 jd Copper 1.0 1 ns 2.2 mg/kg dry 1 04/10/12 04/12/12 Lead 1.0 ns jd 04/12/12 Zinc 04/10/12 19 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028550 Arsenic 0.62 mg/kg dry 10 04/10/12 04/13/12 jd 0.11 ns Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.38

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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10

04/10/12

ns

04/13/12

jd

0.10

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-35 Date Collected: 04/05/12 13:40 Matrix: Soil

Sample ID: 110494GSB-28 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028513

% Solids 93 % by Wt. 0.10 1 04/06/12 as 04/06/12 as N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-36 Date Collected: 04/05/12 14:15 Matrix: Soil

Sample ID: 110494GSB-29 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was 50 was <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12

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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-36 Date Collected: 04/05/12 14:15 Matrix: Soil

1 10 44040:000 00 (0)				04/05/15 15					
Sample ID: 110494GSB-29 (3')		Date F	Received:	04/05/12 15:3	31				
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
OLATILE ORGANIC COMPOUNDS E	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	•	
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	•	
Naphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was	- •	
2-Methylnaphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
Surrogates:	- 30 09.19 0.7	550		0=			20	. •	
1,2-Dichloroethane-d4	96 %	68-133	50	04/09/12	was	04/09/12	was		
Toluene-d8	98 %	75-120	50	04/09/12	was	04/09/12	was		

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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

race ID: Sample ID:	T12D044-36 110494GSB-29 (3')			Collected: Received:	04/05/12 14: 04/05/12 15:		Matrix:	Soil		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
/OLATILE	ORGANIC COMPOUNDS E	BY GC-MS								
4-Bromo	ofluorobenzene	88 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dich	nlorobenzene-d4	83 %	72-127	50	04/09/12	was	04/09/12	was		
Analysis Me	ATILE ORGANIC COMPOU	NDS BY GC-MS							414	
Batch: Naphthale	T028545	<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
•	aphthalene	<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
Acenapht	·	<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
Acenaphti	•	<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
Fluorene		<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
Phenanthi	rene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Anthracen	ne	<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
Fluoranthe	ene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Pyrene		<420 ug/kg dry	420	5	04/10/12	kb	04/12/12	avl		
Benzo (a)	anthracene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Chrysene		<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Benzo (b)	fluoranthene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Benzo (k)	fluoranthene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Benzo (a)	pyrene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Indeno (1,	2,3-cd) pyrene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Dibenz (a	h) anthracene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Benzo (g,l	h,i) perylene	<330 ug/kg dry	330	5	04/10/12	kb	04/12/12	avl		
Surrogate	es:									
Nitrober	nzene-d5	85 %	36-98	5	04/10/12	kb	04/12/12	avl		
2-Fluoro	bbiphenyl	84 %	44-105	5	04/10/12	kb	04/12/12	avl		
Tornhon	ıyl-d14	84 %	46-109	5	04/10/12	kb	04/12/12	avl		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-36 Date Collected: 04/05/12 14:15 Matrix: Soil Sample ID: 110494GSB-29 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 7.5 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 4.2 mg/kg dry 1 jd 2.0 ns Copper 1.8 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 1.4 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 6.7 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 04/10/12 Arsenic 0.66 mg/kg dry 0.11 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.38 mg/kg dry jd 0.38 ns Silver <0.10 mg/kg dry 10 04/10/12 04/13/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028550 Mercury <0.050 mg/kg dry 04/10/12 04/11/12 jd 0.050 ns **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028576 % Solids 99 % by Wt. 04/11/12 04/11/12 Ν 0.10 da da



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-37 Date Collected: 04/05/12 14:45 Matrix: Soil Sample ID: 110494GSB-30 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/13/12 Naphthalene <330 ug/kg dry 1 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/13/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/13/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 04/13/12 <330 ug/kg dry kb avl 330 Anthracene <330 ug/kg dry 04/10/12 04/13/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 04/13/12 kb avl 330 <330 ug/kg dry 04/10/12 kb 04/13/12 Pyrene 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/13/12 avl 330 04/13/12 04/10/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/13/12 avl <330 ug/kg dry 04/10/12 04/13/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/13/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 75 % 36-98 1 04/10/12 kb 04/13/12 avl 2-Fluorobiphenyl 68 % 44-105 04/10/12 kb 04/13/12 avl Terphenyl-d14 70 % 46-109 04/10/12 kb 04/13/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 32 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 4.3 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.4 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.6 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 12 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028550 10 04/10/12 04/13/12 Arsenic 0.89 mg/kg dry ns jd 0.11 Selenium <0.37 mg/kg dry 10 04/10/12 04/13/12 jd 0.37 ns

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-37 Date Collected: 04/05/12 14:45 Matrix: Soil

Sample ID: 110494GSB-30 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A Batch: T028550

Mercury  $< 0.050 \text{ mg/kg dry} \qquad 0.050 \qquad 1 \qquad 04/10/12 \quad \text{ns} \qquad 04/11/12 \quad \text{jd}$ 

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028576

% Solids 97 % by Wt.  $_{0.10}$  1 04/11/12 da 04/11/12 da N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-38 Date Collected: 04/05/12 15:00 Matrix: Soil Sample ID: 110494GSB-31 (3') Date Received: 04/05/12 15:31 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/13/12 Naphthalene <330 ug/kg dry 1 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/13/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/13/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/13/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/13/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/13/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/13/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/13/12 avl 330 04/10/12 04/13/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/13/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh avl <330 ug/kg dry 04/10/12 04/13/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/13/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 81 % 36-98 1 04/10/12 kb 04/13/12 avl 2-Fluorobiphenyl 76 % 44-105 04/10/12 kb 04/13/12 avl Terphenyl-d14 81 % 46-109 04/10/12 kb 04/13/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 16 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 2.7 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.0 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.2 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 8.0 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028550 10 04/10/12 04/13/12 Arsenic 0.68 mg/kg dry ns jd 0.11 Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd 0.38 ns

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-38 Date Collected: 04/05/12 15:00 Matrix: Soil

Sample ID: 110494GSB-31 (3') Date Received: 04/05/12 15:31

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

<u>Analysis Method: EPA 7471A</u> Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

**WET CHEMISTRY** 

Analysis Method: % Calculation

Batch: T028576

% Solids 99 % by Wt. 0.10 1 04/11/12 da 04/11/12 da N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-39 Date Collected: 04/05/12 15:15 Matrix: Soil Sample ID: 110494GSB-32 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 Chloromethane <250 ug/kg dry 04/09/12 04/09/12 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 t-Butyl Ethyl Ether 04/09/12 04/09/12 Ν <250 ug/kg dry 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was 50 was <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was

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<100 ug/kg dry

100

50

04/09/12

was

04/09/12

was

Toluene



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-39 Date Collected: 04/05/12 15:15 Matrix: Soil

Sample ID: 110494GSB-32 (3') Date Received: 04/05/12 15:31

Sample ID: 110494GSB-32 (3')		Date F	Received:	04/05/12 15:3	31				
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE ORGANIC COMPOUNDS E	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-lsopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1,2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was		
Naphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
1,2,3-Trichlorobenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
2-Methylnaphthalene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	N	
Surrogates:	0 0 7	200							
1,2-Dichloroethane-d4	95 %	68-133	50	04/09/12	was	04/09/12	was		
Toluene-d8	95 %	75-120	50	04/09/12		04/09/12			



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-39 Sample ID: 110494GSB-32 (3')			Collected: Received:	04/05/12 15:1 04/05/12 15:3		Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
VOLATILE ORGANIC COMPOUNDS I	BY GC-MS								
4-Bromofluorobenzene	88 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	81 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COMPOU	INDS BY GC-MS								
Analysis Method: EPA 8270C Batch: T028545									
Naphthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Acenaphthylene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Acenaphthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Fluorene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Phenanthrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Chrysene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Surrogates:									
Nitrobenzene-d5	62 %	36-98	2	04/10/12	kb	04/12/12	avl		
2-Fluorobiphenyl	63 %	44-105	2	04/10/12	kb	04/12/12	avl		

# **CERTIFICATE OF ANALYSIS**

61 %

46-109

04/10/12

kb

04/12/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-39 Date Collected: 04/05/12 15:15 Matrix: Soil Sample ID: 110494GSB-32 (3') Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 14 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 3.1 mg/kg dry 1 jd 2.0 ns Copper 1.4 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 6.1 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 9.2 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 Arsenic 04/10/12 0.94 mg/kg dry 0.12 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.39 mg/kg dry jd 0.39 ns Silver <0.10 mg/kg dry 10 04/10/12 04/13/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028550 Mercury <0.050 mg/kg dry 04/10/12 ns 04/11/12 jd 0.050 **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028576 % Solids 96 % by Wt. 04/11/12 04/11/12 Ν 0.10 da da



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-40 Date Collected: 04/05/12 15:30 Matrix: Water Sample ID: 110494EB-2S Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028583 04/10/12 04/10/12 Dichlorodifluoromethane <5.0 ug/L 1 was was 5.0 04/10/12 04/10/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/10/12 04/10/12 Vinyl chloride <1.0 ug/L was was 1.0 04/10/12 04/10/12 Bromomethane <5.0 ug/L was was 5.0 Chloroethane 04/10/12 04/10/12 <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/10/12 04/10/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/10/12 04/10/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/10/12 04/10/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/10/12 04/10/12 1.0 was was Acetone <50 ug/L 1 04/10/12 was 04/10/12 was 50 04/10/12 04/10/12 Iodomethane <1.0 ug/L 1 was was Ν 1.0 04/10/12 04/10/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/10/12 04/10/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/10/12 04/10/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/10/12 Acrylonitrile <2.0 ug/L 2.0 1 04/10/12 was was <1.0 ug/L 04/10/12 04/10/12 trans-1,2-Dichloroethene 1.0 1 was was 04/10/12 04/10/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/10/12 04/10/12 Diisopropyl Ether 5.0 1 was was Ν 04/10/12 04/10/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/10/12 04/10/12 <1.0 ug/L 1.0 1 was was 04/10/12 04/10/12 t-Butyl Ethyl Ether <5.0 ug/L Ν 1 was was 5.0 Bromochloromethane <1.0 ug/L 04/10/12 04/10/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/10/12 04/10/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/10/12 04/10/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/10/12 04/10/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/10/12 was 04/10/12 was 1.0 04/10/12 04/10/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/10/12 was 04/10/12 was Ν 5.0 04/10/12 04/10/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/10/12 was 04/10/12 was Ν 5.0 Trichloroethene <1.0 ug/L 1.0 04/10/12 was 04/10/12 was 1,2-Dichloropropane <1.0 ug/L 04/10/12 was 04/10/12 was 1.0 <5.0 ug/L 04/10/12 04/10/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/10/12 04/10/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/10/12 was 04/10/12 was

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<1.0 ug/L

1.0

1

04/10/12

was

04/10/12

was

Toluene



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-40 Sample ID: 110494EB-2S			Collected: Received:	04/05/12 15:3 04/05/12 15:3		Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANIC COMPOUN									
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
2-Hexanone	<50 ug/L	50	1	04/10/12	was	04/10/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/10/12	was	04/10/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/10/12	was	04/10/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was	N	
Surrogates:	Č	5.0							
1,2-Dichloroethane-d4	101 %	68-133	1	04/10/12	was	04/10/12	was		
Toluene-d8	100 %	75-120	1	04/10/12	was	04/10/12	was		



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# **ANALYTICAL RESULTS**

T12D044 Trace Project ID:

Client Project ID: CTY MUS / 110494C

Trace ID: Sample ID:	T12D044-40 110494EB-2S			Collected: Received:	04/05/12 15: 04/05/12 15:		Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE (	ORGANIC COMPOUNDS	S BY GC-MS								
4-Bromo	ofluorobenzene	80 %	69-119	1	04/10/12	was	04/10/12	was		
1,2-Dich	lorobenzene-d4	111 %	72-127	1	04/10/12	was	04/10/12	was		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-41 Date Collected: 04/05/12 Matrix: Soil

Sample ID: 110494M-3S Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 <250 ug/kg dry 04/09/12 04/09/12 Chloromethane 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was was 50 <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 250 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-41 Date Collected: 04/05/12 Matrix: Soil Sample ID: 110494M-3S Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/09/12 04/09/12 trans-1,3-Dichloropropene <50 ug/kg dry 50 50 was was 50 04/09/12 04/09/12 1,1,2-Trichloroethane <50 ug/kg dry 50 was was Tetrachloroethene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was 2-Hexanone <2500 ug/kg dry 50 04/09/12 04/09/12 2500 was was Dibromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 100 was was 1,2-Dibromoethane (EDB) <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 50 04/09/12 Chlorobenzene <50 ug/kg dry was 04/09/12 was 50 50 04/09/12 04/09/12 1,1,1,2-Tetrachloroethane <100 ug/kg dry 100 was was 50 04/09/12 04/09/12 Ethylbenzene <50 ug/kg dry was was 50 50 04/09/12 04/09/12 m,p-Xylene <100 ug/kg dry 100 was was Ν 50 04/09/12 04/09/12 o-Xylene <50 ug/kg dry 50 was was Ν 50 04/09/12 04/09/12 Xylenes, total <150 ug/kg dry 150 was was Ν 04/09/12 04/09/12 50 Styrene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 <100 ug/kg dry Bromoform 100 was was 50 04/09/12 04/09/12 <250 ug/kg dry Isopropylbenzene 250 was was 1,1,2,2-Tetrachloroethane <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 50 04/09/12 04/09/12 1,2,3-Trichloropropane <100 ug/kg dry was 100 was 04/09/12 trans-1,4-Dichloro-2-butene 50 04/09/12 <50 ug/kg dry 50 was was Bromobenzene <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 50 04/09/12 04/09/12 n-Propylbenzene <100 ug/kg dry 100 was was 1,3,5-Trimethylbenzene <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 <50 ug/kg dry 50 04/09/12 04/09/12 was t-Butvl Benzene was 50 1,2,4-Trimethylbenzene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 sec-Butylbenzene <50 ug/kg dry was was 50 p-Isopropyltoluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 1,3-Dichlorobenzene <100 ug/kg dry was was 100 1,4-Dichlorobenzene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 n-Butylbenzene <50 ug/kg dry was was 50 <50 ug/kg dry 50 04/09/12 04/09/12 1,2,3-Trimethylbenzene 50 was was Ν <100 ug/kg dry 50 04/09/12 04/09/12 1,2-Dichlorobenzene 100 was was 1,2-Dibromo-3-chloropropane <100 ug/kg dry 50 04/09/12 04/09/12 100 was was Hexachloroethane <100 ug/kg dry 50 04/09/12 was 04/09/12 Ν 100 was 1,2,4-Trichlorobenzene <330 ug/kg dry 50 04/09/12 04/09/12 330 was was Naphthalene <330 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 330 1,2,3-Trichlorobenzene <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 50 04/09/12 04/09/12 2-Methylnaphthalene <330 ug/kg dry was was Ν 330

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91 %

97 %

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68-133

75-120

50

50

04/09/12

04/09/12

was

was

04/09/12

04/09/12

was

was

1,2-Dichloroethane-d4

Surrogates:

Toluene-d8



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

	T12D044-41 110494M-3S			Collected: Received:	04/05/12 04/05/12 15:	31	Matrix:	Soil		
PARAMETERS		RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE OR	GANIC COMPOUNDS	S BY GC-MS								
4-Bromofluo	orobenzene	88 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichloro	obenzene-d4	82 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATIL	LE ORGANIC COMPO	DUNDS BY GC-MS								
Analysis Method Batch: T0										
Naphthalene		<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
2-Methylnaph	nthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Acenaphthyle	ene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Acenaphthen	ie	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Fluorene		<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Phenanthrene	е	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Anthracene		<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Fluoranthene	•	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Pyrene		<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (a) ant	thracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Chrysene		<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (b) fluo	oranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (k) fluo	oranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (a) pyr	rene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Indeno (1,2,3	B-cd) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Dibenz (a,h) a	anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Benzo (g,h,i)	perylene	<330 ug/kg dry	330	2	04/10/12	kb	04/12/12	avl		
Surrogates:										
Nitrobenzer		81 %	36-98	2	04/10/12	kb	04/12/12	avl		
2-Fluorobip	henyl	79 %	44-105	2	04/10/12	kb	04/12/12	avl		
Terphenyl-o	d14	76 %	46-109	2	04/10/12	kb	04/12/12	avl		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-41 Date Collected: 04/05/12 Matrix: Soil Sample ID: 110494M-3S Date Received: 04/05/12 15:31 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 7.6 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 2.8 mg/kg dry 1 jd 2.0 ns Copper 1.3 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 2.0 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 5.7 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 Arsenic 04/10/12 0.50 mg/kg dry 0.12 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.39 mg/kg dry jd 0.39 ns Silver <0.10 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.10 Analysis Method: EPA 7471A Batch: T028550 <0.050 mg/kg dry Mercury 04/10/12 ns 04/11/12 jd 0.050 **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028576 % Solids 98 % by Wt. 04/11/12 04/11/12 Ν 0.10 da da



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-42 Date Collected: 04/06/12 Matrix: Aqueous

Date Received:   O4/06/12 12:53	
Notatile Organic Compounds by Gc-Ms   Analysis Method: EPA 82608   Batch: 7028583   Batch: 7028583   Chloromethane   \$5.0 ug/L   \$5.0   1   \$04/10/12   was   \$04/10/12   wa	
Analysis Method: EPA 82808   Batch: 7028583   Solupit	s MC
Batch: To28583   Dichlorodifluoromethane   \$5.0 ug/L   \$5.0   1   \$04/10/12   was   \$04/10/12   was	
Dichlorodifiluoromethane	
Chloromethane	
Vinyl chloride	
Bromomethane         <5.0 ug/L         5.0         1         O4/10/12         was         04/10/12         was           Chloroethane         <5.0 ug/L	
Chloroethane         <5.0 ug/L         5.0         1         04/10/12         was         04/10/12         was           Trichlorofluoromethane         <1.0 ug/L	
Trichlorofiluoromethane	
Diethyl ether	
Tert-butyl alcohol	
1,1-Dichloroethene         <1.0 ug/L         1.0         1         04/10/12         was         04/10/12         was           Acetone         <50 ug/L	
Acetone         <50 ug/L         50         1         04/10/12         was         04/10/12         was         N           Iodomethane         <1.0 ug/L	
Carbon disulfide	
Carbon disulfide         <5.0 ug/L         5.0         1         04/10/12         was         04/10/12         was           Methyl-tert-butyl ether         <5.0 ug/L	
Methyl-tert-butyl ether         <5.0 ug/L         5.0         1         04/10/12 was         04/10/12 was         was           Methylene chloride         <5.0 ug/L	
Methylene chloride         <5.0 ug/L         5.0         1         04/10/12         was         04/10/12         was           Acrylonitrile         <2.0 ug/L	
Acrylonitrile         <2.0 ug/L         2.0         1         04/10/12         was         04/10/12         was           trans-1,2-Dichloroethene         <1.0 ug/L         1.0         1         04/10/12         was         04/10/12         was           1,1-Dichloroethane         <1.0 ug/L         1.0         1         04/10/12         was         04/10/12         was           Diisopropyl Ether         <5.0 ug/L         5.0         1         04/10/12         was         04/10/12         was         04/10/12         was         N           2-Butanone         <25 ug/L         25         1         04/10/12         was         04/10/12         was         04/10/12         was         N           2-Butyl Ether         <1.0 ug/L         1.0         1         04/10/12         was         04/10/12         was         N           Bromochloromethane         <1.0 ug/L         1.0         1         04/10/12         was         04/10/12         was         N           Tetrahydrofuran         <90 ug/L         90         1         04/10/12         was         04/10/12         was         N           Chloroform         <1.0 ug/L         1.0         1         04/10/12         was </td <td></td>	
trans-1,2-Dichloroethene	
1,1-Dichloroethane       <1.0 ug/L	
Diisopropyl Ether         <5.0 ug/L         5.0         1         04/10/12         was         04/10/12         was         N           2-Butanone         <25 ug/L	
2-Butanone <25 ug/L 25 1 04/10/12 was 04/10/12 was cis-1,2-Dichloroethene <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1.0 ug/L 5.0 1 04/10/12 was 04/10/12 was 04/10/12 was N Bromochloromethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was N Tetrahydrofuran <90 ug/L 90 1 04/10/12 was 04/10/12 was 04/10/12 was N Chloroform <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was N OCHIOROFORM <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1-Trichloroethane <1.0 ug/L 1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1,1-Trichloroethane \1.0 ug/L 1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1,1-Trichloroethane \1.0 ug/L 1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1,1-Trichloroethane \1.0 ug/L 1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was 04/10/12 was 1,1,1,1,1,1-Trichloroethane \1.0 ug/L	
cis-1,2-Dichloroethene       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was         t-Butyl Ethyl Ether       <5.0 ug/L       5.0       1       04/10/12       was       04/10/12       was       N         Bromochloromethane       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was       N         Tetrahydrofuran       <90 ug/L       90       1       04/10/12       was       04/10/12       was       N         Chloroform       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was       04/10/12       was         1,1,1-Trichloroethane       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was       04/10/12       was         Carbon tetrachloride       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was       04/10/12       was       N         Benzene       <1.0 ug/L       5.0       1       04/10/12       was       04/10/12       was       N         1,2-Dichloroethane       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was       N <t< td=""><td></td></t<>	
t-Butyl Ethyl Ether	
Bromochloromethane         <1.0 ug/L         1.0         1         04/10/12         was         04/10/12         was           Tetrahydrofuran         <90 ug/L	
Tetrahydrofuran         <90 ug/L         90         1         04/10/12         was         04/10/12         was         N           Chloroform         <1.0 ug/L	
Chloroform       <1.0 ug/L       1.0       1       04/10/12 was       was       04/10/12 was       was         1,1,1-Trichloroethane       <1.0 ug/L	
1,1,1-Trichloroethane       <1.0 ug/L	
Carbon tetrachloride         <1.0 ug/L         1.0         1         04/10/12 was         was         04/10/12 was         was           Benzene         <1.0 ug/L	
Benzene       <1.0 ug/L       1.0       1       04/10/12       was       04/10/12       was         t-Amyl Methyl Ether       <5.0 ug/L	
t-Amyl Methyl Ether <5.0 ug/L 5.0 1 04/10/12 was 04/10/12 was N 1,2-Dichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	
1,2-Dichloroethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	
0.0	
Trichloroethene <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	
1,2-Dichloropropane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	
Dibromomethane <5.0 ug/L 5.0 1 04/10/12 was 04/10/12 was	
Bromodichloromethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	
cis-1,3-Dichloropropene <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	
4-Methyl-2-pentanone <50 ug/L 50 1 04/10/12 was 04/10/12 was	
Toluene <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was	



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

race ID: T12D044-42 ample ID: Trip Blank #3			Collected: Received:	04/06/12 04/06/12 12:5	i3	Matrix:	Aqueous	S	
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
OLATILE ORGANIC COMPOUND									
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
2-Hexanone	<50 ug/L	50	1	04/10/12	was	04/10/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/10/12	was	04/10/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/10/12	was	04/10/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/10/12	was	04/10/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was		
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/10/12	was	04/10/12	was	N	
Surrogates:	· ·	5.0							
1,2-Dichloroethane-d4	100 %	68-133	1	04/10/12	was	04/10/12	was		
Toluene-d8	98 %	75-120	1	04/10/12	was	04/10/12	was		



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# **ANALYTICAL RESULTS**

T12D044 Trace Project ID:

Client Project ID: CTY MUS / 110494C

Trace ID: Sample ID:	T12D044-42 Trip Blank #3			Collected: Received:	04/06/12 04/06/12 12:	53	Matrix:	Aqueou	s	
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE (	ORGANIC COMPOUND	S BY GC-MS								
4-Bromo	ofluorobenzene	78 %	69-119	1	04/10/12	was	04/10/12	was		
1,2-Dich	nlorobenzene-d4	109 %	72-127	1	04/10/12	was	04/10/12	was		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-43 Date Collected: 04/06/12 08:40 Matrix: Soil Sample ID: 110494GSB-33 (3') Date Received: 04/06/12 12:53 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/12/12 Naphthalene <330 ug/kg dry 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 82 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 76 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 78 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 13 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/12/12 4.8 mg/kg dry 1 04/10/12 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 jd Copper 1.0 1 ns 1.4 mg/kg dry 1 04/10/12 04/12/12 Lead 1.0 ns jd 04/12/12 Zinc 04/10/12 7.3 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028550 Arsenic 0.73 mg/kg dry 10 04/10/12 ns 04/13/12 jd 0.11 Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.38

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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10

04/10/12

ns

04/13/12

jd

0.10

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-43 Date Collected: 04/06/12 08:40 Matrix: Soil Sample ID: 110494GSB-33 (3') Date Received: 04/06/12 12:53 **RESULTS UNITS** RDL NOTES **PARAMETERS** DILUTION PREPARED BY ANALYZED BY

# METALS, TOTAL

<u>Analysis Method: EPA 7471A</u> Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

# **WET CHEMISTRY**

Analysis Method: % Calculation

Batch: T028576

% Solids 97 % by Wt.  $_{0.10}$  1 04/11/12 da 04/11/12 da N

MCL



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-44 Date Collected: 04/06/12 09:00 Matrix: Soil

Sample ID: 110494GSB-34 (3') Date Received: 04/06/12 12:53

**PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 04/09/12 04/09/12 Chloromethane <250 ug/kg dry 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was was 50 <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 250 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250

#### **CERTIFICATE OF ANALYSIS**

<50 ug/kg dry

<50 ug/kg dry

<250 ug/kg dry

<100 ug/kg dry

<50 ug/kg dry

<2500 ug/kg dry

<100 ug/kg dry

50

50

250

100

50

2500

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50

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50

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50

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50

04/09/12

04/09/12

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was

was

was

was

was

was

was

Trichloroethene

Dibromomethane

1,2-Dichloropropane

Bromodichloromethane

cis-1,3-Dichloropropene

4-Methyl-2-pentanone

Toluene



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-44 Date Collected: 04/06/12 09:00 Matrix: Soil Sample ID: 110494GSB-34 (3') Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/09/12 04/09/12 trans-1,3-Dichloropropene <50 ug/kg dry 50 50 was was 50 04/09/12 04/09/12 1,1,2-Trichloroethane <50 ug/kg dry 50 was was Tetrachloroethene <50 ug/kg dry 50 50 04/09/12 was 04/09/12 was 2-Hexanone <2500 ug/kg dry 50 04/09/12 04/09/12 2500 was was Dibromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 100 was was 1,2-Dibromoethane (EDB) <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 50 04/09/12 Chlorobenzene <50 ug/kg dry was 04/09/12 was 50 50 04/09/12 04/09/12 1,1,1,2-Tetrachloroethane <100 ug/kg dry 100 was was 50 04/09/12 04/09/12 Ethylbenzene <50 ug/kg dry was was 50 50 04/09/12 04/09/12 m,p-Xylene <100 ug/kg dry 100 was was Ν 50 04/09/12 04/09/12 o-Xylene <50 ug/kg dry 50 was was Ν 50 04/09/12 04/09/12 Xylenes, total <150 ug/kg dry 150 was was Ν 04/09/12 04/09/12 50 Styrene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 <100 ug/kg dry Bromoform 100 was was 50 04/09/12 04/09/12 <250 ug/kg dry Isopropylbenzene 250 was was 1,1,2,2-Tetrachloroethane <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 50 04/09/12 04/09/12 1,2,3-Trichloropropane <100 ug/kg dry was 100 was 04/09/12 trans-1,4-Dichloro-2-butene 50 04/09/12 <50 ug/kg dry 50 was was Bromobenzene <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 50 04/09/12 04/09/12 n-Propylbenzene <100 ug/kg dry 100 was was 1,3,5-Trimethylbenzene <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 <50 ug/kg dry 50 04/09/12 04/09/12 was t-Butvl Benzene was 50 1,2,4-Trimethylbenzene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 sec-Butylbenzene <50 ug/kg dry was was 50 p-Isopropyltoluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 1,3-Dichlorobenzene <100 ug/kg dry was was 100 1,4-Dichlorobenzene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100 50 04/09/12 04/09/12 n-Butylbenzene <50 ug/kg dry was was 50 <50 ug/kg dry 50 04/09/12 04/09/12 1,2,3-Trimethylbenzene 50 was was Ν <100 ug/kg dry 50 04/09/12 04/09/12 1,2-Dichlorobenzene 100 was was 1,2-Dibromo-3-chloropropane <100 ug/kg dry 50 04/09/12 04/09/12 100 was was Hexachloroethane <100 ug/kg dry 50 04/09/12 was 04/09/12 Ν 100 was 1,2,4-Trichlorobenzene <330 ug/kg dry 50 04/09/12 04/09/12 330 was was Naphthalene <330 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 330 1,2,3-Trichlorobenzene <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 50 04/09/12 04/09/12 2-Methylnaphthalene <330 ug/kg dry was was Ν 330 Surrogates: 1,2-Dichloroethane-d4 95 % 68-133 50 04/09/12 was 04/09/12 was

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100 %

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75-120

50

04/09/12

was

04/09/12

was

Toluene-d8



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-44  Sample ID: 110494GSB-34 (3')		Date Collected: Date Received:		04/06/12 09:00 04/06/12 12:53		Matrix: Soil			
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUNDS	BY GC-MS								
4-Bromofluorobenzene	85 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	80 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COMPO	UNDS BY GC-MS								
<u>Analysis Method: EPA 8270C</u> Batch: T028545									
Naphthalene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Acenaphthylene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Acenaphthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Fluorene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Phenanthrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Chrysene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	1	04/10/12	kb	04/12/12	avl		
Surrogates:									
Nitrobenzene-d5	83 %	36-98	1	04/10/12	kb	04/12/12	avl		
2-Fluorobiphenyl	79 %	44-105	1	04/10/12	kb	04/12/12	avl		

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80 %

46-109

04/10/12

kb

04/12/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-44 Date Collected: 04/06/12 09:00 Matrix: Soil Sample ID: 110494GSB-34 (3') Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 Barium 04/10/12 04/12/12 9.2 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 2.5 mg/kg dry 1 jd 2.0 ns Copper 1.4 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 4.1 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 7.9 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028550 Arsenic 04/10/12 0.61 mg/kg dry 0.11 10 ns 04/13/12 jd Selenium 10 04/10/12 04/13/12 <0.38 mg/kg dry jd 0.38 ns Silver <0.10 mg/kg dry 10 04/10/12 04/13/12 ns jd 0.10 Analysis Method: EPA 7471A Batch: T028550 <0.050 mg/kg dry Mercury 04/10/12 ns 04/11/12 jd 0.050 **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028576 % Solids 97 % by Wt. 04/11/12 04/11/12 Ν 0.10 da da



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-45 Date Collected: 04/06/12 09:35 Matrix: Soil Sample ID: 110494GSB-35 (3') Date Received: 04/06/12 12:53 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/12/12 Naphthalene <330 ug/kg dry 1 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/12/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 76 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 77 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 78 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028550 **Barium** 7.2 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/12/12 2.7 mg/kg dry 1 04/10/12 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 jd Copper 1.0 1 ns 1.2 mg/kg dry 1 04/10/12 04/12/12 Lead 1.0 ns jd 04/12/12 Zinc 04/10/12 3.6 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028550 Arsenic 0.57 mg/kg dry 10 04/10/12 ns 04/13/12 jd 0.11 Selenium <0.37 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.37

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<0.10 mg/kg dry

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10

04/10/12

ns

04/13/12

jd

0.10

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-45 Date Collected: 04/06/12 09:35 Matrix: Soil

Sample ID: 110494GSB-35 (3') Date Received: 04/06/12 12:53

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028550

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028576

% Solids 98 % by Wt. 0.10 1 04/11/12 da 04/11/12 da N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-46 Date Collected: 04/06/12 09:50 Matrix: Soil Sample ID: 110494GSB-36 (3') Date Received: 04/06/12 12:53 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/12/12 Naphthalene <330 ug/kg dry 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/12/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 79 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 75 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 75 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028558 **Barium** 13 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 2.4 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.3 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 4.9 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 7.9 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028558 10 04/10/12 04/13/12 Arsenic 0.78 mg/kg dry 0.11 ns jd Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd 0.38 ns

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<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

 Trace ID:
 T12D044-46
 Date Collected:
 04/06/12 09:50
 Matrix:
 Soil

 Sample ID:
 110494GSB-36 (3')
 Date Received:
 04/06/12 12:53

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL
METALS, TOTAL

<u>Analysis Method: EPA 7471A</u> Batch: T028558

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12

**WET CHEMISTRY** 

Analysis Method: % Calculation

 Batch: T028576

 % Solids
 91 % by Wt.
 0.10
 1
 04/11/12
 da
 04/11/12
 da
 N

jd



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-47 Date Collected: 04/06/12 10:15 Matrix: Soil Sample ID: 110494GSB-37 (3') Date Received: 04/06/12 12:53 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 Naphthalene <330 ug/kg dry 04/10/12 kb 04/12/12 avl 330 <330 ug/kg dry 04/10/12 04/12/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/12/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/12/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/12/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/12/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/12/12 330 avl Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/12/12 avl 330 04/10/12 04/12/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/12/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh 04/12/12 avl <330 ug/kg dry 04/10/12 04/12/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/12/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 81 % 36-98 1 04/10/12 kb 04/12/12 avl 2-Fluorobiphenyl 76 % 44-105 04/10/12 kb 04/12/12 avl Terphenyl-d14 80 % 46-109 04/10/12 kb 04/12/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028558 **Barium** 3.6 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 <2.0 mg/kg dry 2.0 1 ns jd <1.0 mg/kg dry 04/10/12 04/12/12 Copper 1 ns jd 1.0 1 04/10/12 04/12/12 Lead 1.5 mg/kg dry 1.0 ns jd 04/12/12 Zinc 04/10/12 2.6 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028558 Arsenic 0.36 mg/kg dry 10 04/10/12 ns 04/13/12 jd 0.12 <0.40 mg/kg dry 10 04/10/12 04/13/12 Selenium ns jd 0.40

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<0.10 mg/kg dry

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04/10/12

ns

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jd

0.10

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-47 Date Collected: 04/06/12 10:15 Matrix: Soil

Sample ID: 110494GSB-37 (3') Date Received: 04/06/12 12:53

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028558

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028576

% Solids 99 % by Wt. 0.10 1 04/11/12 da 04/11/12 da N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-48 Date Collected: 04/06/12 10:35 Matrix: Soil Sample ID: 110494GSB-38 (3') Date Received: 04/06/12 12:53 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/13/12 Naphthalene <330 ug/kg dry 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/13/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/13/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/13/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/13/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/13/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/13/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/13/12 avl 330 04/10/12 04/13/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/13/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh avl <330 ug/kg dry 04/10/12 04/13/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/13/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 85 % 36-98 1 04/10/12 kb 04/13/12 avl 2-Fluorobiphenyl 78 % 44-105 04/10/12 kb 04/13/12 avl Terphenyl-d14 78 % 46-109 04/10/12 kb 04/13/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028558 **Barium** 5.6 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/12/12 2.4 mg/kg dry 1 04/10/12 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 jd Copper 1.0 1 ns 1 04/10/12 04/12/12 Lead 51 mg/kg dry 1.0 ns jd 04/12/12 Zinc 04/10/12 46 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028558 Arsenic 0.50 mg/kg dry 0.12 10 04/10/12 ns 04/13/12 jd Selenium <0.40 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.40

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04/10/12

ns

04/13/12

jd

0.10

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-48 Date Collected: 04/06/12 10:35 Matrix: Soil

Sample ID: 110494GSB-38 (3') Date Received: 04/06/12 12:53

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A

Batch: T028558

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028576

% Solids 97 % by Wt.  $_{0.10}$  1 04/11/12 da 04/11/12 da N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-49 Date Collected: 04/06/12 10:55 Matrix: Soil Sample ID: 110494GSB-39 (3') Date Received: 04/06/12 12:53 PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028545 04/13/12 Naphthalene <330 ug/kg dry 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/13/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/13/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/13/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/13/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/13/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/13/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/13/12 avl 330 04/10/12 04/13/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/13/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh avl <330 ug/kg dry 04/10/12 04/13/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/13/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 83 % 36-98 1 04/10/12 kb 04/13/12 avl 2-Fluorobiphenyl 78 % 44-105 04/10/12 kb 04/13/12 avl Terphenyl-d14 76 % 46-109 04/10/12 kb 04/13/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028558 **Barium** 5.7 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/12/12 2.2 mg/kg dry 1 04/10/12 ns jd 2.0 <1.0 mg/kg dry 04/10/12 04/12/12 jd Copper 1.0 1 ns 3.6 mg/kg dry 1 04/10/12 04/12/12 Lead 1.0 ns jd 04/12/12 Zinc 04/10/12 5.3 mg/kg dry 1 jd 1.0 ns Analysis Method: EPA 6020 Batch: T028558 Arsenic 0.49 mg/kg dry 10 04/10/12 ns 04/13/12 jd 0.11 Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd ns 0.38

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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10

04/10/12

ns

04/13/12

jd

0.10

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-49 Date Collected: 04/06/12 10:55 Matrix: Soil

Sample ID: 110494GSB-39 (3') Date Received: 04/06/12 12:53

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

METALS, TOTAL

Analysis Method: EPA 7471A Batch: T028558

Mercury <0.050 mg/kg dry 0.050 1 04/10/12 ns 04/11/12 jd

WET CHEMISTRY

Analysis Method: % Calculation

Batch: T028576

% Solids 96 % by Wt. 0.10 1 04/11/12 da 04/11/12 da N



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-50 Date Collected: 04/06/12 11:30 Matrix: Soil

Sample ID: 110494GSB-40 Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028562 Dichlorodifluoromethane <250 ug/kg dry 50 04/09/12 was 04/09/12 was 250 04/09/12 04/09/12 Chloromethane <250 ug/kg dry 50 was was 250 04/09/12 04/09/12 Vinyl chloride <40 ug/kg dry 50 was was Ν 40 50 04/09/12 04/09/12 Bromomethane <200 ug/kg dry was was 200 50 04/09/12 04/09/12 Chloroethane <250 ug/kg dry was was 250 Trichlorofluoromethane <100 ug/kg dry 50 04/09/12 04/09/12 was was 100 Diethyl ether <200 ug/kg dry 50 04/09/12 04/09/12 200 was was Ν Tert-butyl alcohol <2500 ug/kg dry 50 04/09/12 04/09/12 Ν 2500 was was 1,1-Dichloroethene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was Acetone <1000 ug/kg dry 50 04/09/12 was 04/09/12 was 1000 50 04/09/12 04/09/12 lodomethane <100 ug/kg dry was was Ν 100 04/09/12 04/09/12 Carbon disulfide <250 ug/kg dry 50 was was 250 50 04/09/12 04/09/12 Methyl-tert-butyl ether <250 ug/kg dry was was 250 50 04/09/12 04/09/12 Methylene chloride <250 ug/kg dry was was 250 <100 ug/kg dry Acrylonitrile 100 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 trans-1,2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 04/09/12 1,1-Dichloroethane <50 ug/kg dry 50 was was <250 ug/kg dry 50 04/09/12 04/09/12 Diisopropyl Ether 250 was was Ν 50 04/09/12 04/09/12 <750 ug/kg dry 2-Butanone 750 was was 50 04/09/12 04/09/12 cis-1.2-Dichloroethene <50 ug/kg dry 50 was was 50 04/09/12 t-Butyl Ethyl Ether <250 ug/kg dry 04/09/12 Ν 250 was was Bromochloromethane <100 ug/kg dry 50 04/09/12 04/09/12 was 100 was <1000 ug/kg dry Tetrahydrofuran 50 04/09/12 04/09/12 Ν was was 1000 Chloroform <50 ug/kg dry 50 04/09/12 04/09/12 was was 50 <50 ug/kg dry 1.1.1-Trichloroethane 50 04/09/12 04/09/12 was was 50 Carbon tetrachloride <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 04/09/12 Benzene <50 ug/kg dry 50 was 04/09/12 was 50 t-Amyl Methyl Ether <250 ug/kg dry 250 50 04/09/12 was 04/09/12 was Ν 50 04/09/12 04/09/12 1,2-Dichloroethane <50 ug/kg dry was was 50 Cyclohexane <250 ug/kg dry 50 04/09/12 was 04/09/12 was Ν 250 Trichloroethene <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 1,2-Dichloropropane <50 ug/kg dry 50 04/09/12 was 04/09/12 was 50 <250 ug/kg dry 50 04/09/12 04/09/12 Dibromomethane 250 was was Bromodichloromethane <100 ug/kg dry 100 50 04/09/12 was 04/09/12 was cis-1,3-Dichloropropene <50 ug/kg dry 50 04/09/12 04/09/12 50 was was 4-Methyl-2-pentanone <2500 ug/kg dry 2500 50 04/09/12 was 04/09/12 was Toluene <100 ug/kg dry 50 04/09/12 was 04/09/12 was 100



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-50 Date Collected: 04/06/12 11:30 Matrix: Soil

		- · -		0.1/00/12 11.0		atix.			
Sample ID: 110494GSB-40		Date F	Received:	04/06/12 12:5	3				
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE ORGANIC COMPOUNDS	BY GC-MS								
trans-1,3-Dichloropropene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,2-Trichloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Tetrachloroethene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
2-Hexanone	<2500 ug/kg dry	2500	50	04/09/12	was	04/09/12	was		
Dibromochloromethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromoethane (EDB)	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Chlorobenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Ethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
m,p-Xylene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
o-Xylene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
Xylenes, total	<150 ug/kg dry	150	50	04/09/12	was	04/09/12	was	N	
Styrene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromoform	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Isopropylbenzene	<250 ug/kg dry	250	50	04/09/12	was	04/09/12	was		
1,1,2,2-Tetrachloroethane	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
trans-1,4-Dichloro-2-butene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
Bromobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Propylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
t-Butyl Benzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,4-Trimethylbenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
sec-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
p-Isopropyltoluene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,3-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,4-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
n-Butylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was		
1,2,3-Trimethylbenzene	<50 ug/kg dry	50	50	04/09/12	was	04/09/12	was	N	
1.2-Dichlorobenzene	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
1,2-Dibromo-3-chloropropane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was		
Hexachloroethane	<100 ug/kg dry	100	50	04/09/12	was	04/09/12	was	N	
1,2,4-Trichlorobenzene	<330 ug/kg dry	330	50	04/09/12	was	04/09/12	was	14	
Naphthalene	<330 ug/kg dry		50	04/09/12		04/09/12		N	
1,2,3-Trichlorobenzene	<350 ug/kg dry	330	50	04/09/12	was	04/09/12	was	14	
, ,	<250 ug/kg ary <330 ug/kg dry	250	50	04/09/12	was	04/09/12	was	N!	
2-Methylnaphthalene	Sou ug/kg ury	330	50	04/09/12	was	04/09/12	was	N	
Surrogates:	94 %	68-133	50	04/09/12	was	04/09/12	was		
1,2-Dichloroethane-d4									
Toluene-d8	100 %	75-120	50	04/09/12	was	04/09/12	was		



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-50 Sample ID: 110494GSB-40			Date Collected: Date Received:		30 53	Matrix:	Soil		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANIC COMPOUN	DS BY GC-MS								
4-Bromofluorobenzene	85 %	69-119	50	04/09/12	was	04/09/12	was		
1,2-Dichlorobenzene-d4	79 %	72-127	50	04/09/12	was	04/09/12	was		
SEMI-VOLATILE ORGANIC COMI	POUNDS BY GC-MS								
Analysis Method: EPA 8270C									
Batch: T028546									
Naphthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
2-Methylnaphthalene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Acenaphthylene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Acenaphthene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Fluorene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Phenanthrene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Benzo (a) anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Chrysene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Benzo (b) fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Benzo (k) fluoranthene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Benzo (a) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Indeno (1,2,3-cd) pyrene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Dibenz (a,h) anthracene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Benzo (g,h,i) perylene	<330 ug/kg dry	330	2	04/10/12	kb	04/13/12	avl		
Surrogates:									
Nitrobenzene-d5	87 %	36-98	2	04/10/12	kb	04/13/12	avl		
2-Fluorobiphenyl	83 %	44-105	2	04/10/12	kb	04/13/12	avl		

# **CERTIFICATE OF ANALYSIS**

81 %

46-109

04/10/12

kb

04/13/12

avl

Terphenyl-d14



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-50 Date Collected: 04/06/12 11:30 Matrix: Soil Sample ID: 110494GSB-40 Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION PREPARED BY ANALYZED BY **NOTES** MCL **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028558 Barium 04/10/12 04/12/12 16 mg/kg dry 1.0 1 ns jd Cadmium <0.20 mg/kg dry 1 04/10/12 ns 04/12/12 jd 0.20 Chromium 04/10/12 04/12/12 8.3 mg/kg dry 1 jd 2.0 ns Copper 5.6 mg/kg dry 04/10/12 ns 04/12/12 jd 1.0 Lead 8.5 mg/kg dry 1.0 04/10/12 ns 04/12/12 jd Zinc 18 mg/kg dry 1.0 1 04/10/12 ns 04/12/12 jd Analysis Method: EPA 6020 Batch: T028558 04/10/12 Arsenic 1.6 mg/kg dry 0.11 10 ns 04/13/12 jd Selenium <0.38 mg/kg dry 10 04/10/12 04/13/12 jd 0.38 ns Silver 04/10/12 04/13/12 0.11 mg/kg dry 10 jd 0.10 ns Analysis Method: EPA 7471A Batch: T028558 04/11/12 Mercury <0.050 mg/kg dry 04/10/12 ns jd 0.050 **WET CHEMISTRY** Analysis Method: % Calculation Batch: T028576 % Solids 94 % by Wt. 04/11/12 04/11/12 da da Ν 0.10



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C Trace ID: T12D044-51 Date Collected: 04/06/12 Matrix: Soil Sample ID: 110494M-4S Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY ANALYZED BY **NOTES** MCL SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS Analysis Method: EPA 8270C Batch: T028546 04/13/12 Naphthalene <330 ug/kg dry 04/10/12 kb avl 330 <330 ug/kg dry 04/10/12 04/13/12 2-Methylnaphthalene 1 kb avl 330 04/10/12 04/13/12 Acenaphthylene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Acenaphthene <330 ug/kg dry kb avl 330 04/10/12 04/13/12 Fluorene <330 ug/kg dry kb avl 330 Phenanthrene 04/10/12 kb 04/13/12 <330 ug/kg dry avl 330 Anthracene <330 ug/kg dry 04/10/12 04/13/12 330 kb avl Fluoranthene <330 ug/kg dry 04/10/12 kb 04/13/12 330 avl Pyrene <330 ug/kg dry 04/10/12 kb 04/13/12 avl 330 Benzo (a) anthracene <330 ug/kg dry 1 04/10/12 kb 04/13/12 avl 330 04/10/12 04/13/12 Chrysene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (b) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (k) fluoranthene <330 ug/kg dry 1 kb avl 330 04/10/12 04/13/12 Benzo (a) pyrene <330 ug/kg dry 1 kb avl 330 04/13/12 Indeno (1,2,3-cd) pyrene <330 ug/kg dry 330 1 04/10/12 kh avl <330 ug/kg dry 04/10/12 04/13/12 Dibenz (a,h) anthracene 330 1 kb avl 04/10/12 04/13/12 <330 ug/kg dry 1 Benzo (g,h,i) perylene 330 kb avl Surrogates: Nitrobenzene-d5 83 % 36-98 1 04/10/12 kb 04/13/12 avl 2-Fluorobiphenyl 75 % 44-105 04/10/12 kb 04/13/12 avl Terphenyl-d14 77 % 46-109 04/10/12 kb 04/13/12 avl **METALS, TOTAL** Analysis Method: EPA 6010B Batch: T028558 **Barium** 8.4 mg/kg dry 1 04/10/12 ns 04/12/12 jd 1.0 04/10/12 04/12/12 Cadmium <0.20 mg/kg dry 1 ns jd 0.20 Chromium 04/10/12 04/12/12 3.1 mg/kg dry 1 ns jd 2.0 04/10/12 04/12/12 Copper 1.0 mg/kg dry 1.0 1 ns jd 04/12/12 Lead 1.4 mg/kg dry 1 04/10/12 jd 1.0 ns Zinc 04/10/12 04/12/12 4.3 mg/kg dry 1 jd ns 1.0 Analysis Method: EPA 6020 Batch: T028558 10 04/10/12 04/13/12 Arsenic 0.63 mg/kg dry ns jd 0.11 Selenium <0.37 mg/kg dry 10 04/10/12 04/13/12 jd 0.37 ns

#### **CERTIFICATE OF ANALYSIS**

<0.10 mg/kg dry

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0.10

10

04/10/12

ns

04/13/12

jd

Silver



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-51 Date Collected: 04/06/12 Matrix: Soil Sample ID: 110494M-4S Date Received: 04/06/12 12:53 **RESULTS UNITS** RDL PREPARED NOTES **PARAMETERS** DILUTION BY ANALYZED BY MCL **METALS, TOTAL** Analysis Method: EPA 7471A Batch: T028558 <0.050 mg/kg dry 04/10/12 04/11/12 jd Mercury 0.050 ns

## **WET CHEMISTRY**

Analysis Method: % Calculation

Batch: T028576

% Solids 98 % by Wt. 0.10 1 04/11/12 da 04/11/12 da N



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#### ANALYTICAL RESULTS

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-52 Date Collected: 04/06/12 12:15 Matrix: Aqueous

Sample ID: 110494EB-3S Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028583 04/10/12 04/10/12 Dichlorodifluoromethane <5.0 ug/L 1 was was 5.0 04/10/12 04/10/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/10/12 04/10/12 Vinyl chloride <1.0 ug/L was was 1.0 04/10/12 04/10/12 Bromomethane <5.0 ug/L was was 5.0 Chloroethane 04/10/12 04/10/12 <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/10/12 04/10/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/10/12 04/10/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/10/12 04/10/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/10/12 04/10/12 1.0 was was Acetone <50 ug/L 1 04/10/12 was 04/10/12 was 50 04/10/12 04/10/12 Iodomethane <1.0 ug/L 1 was was Ν 1.0 04/10/12 04/10/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/10/12 04/10/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/10/12 04/10/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/10/12 Acrylonitrile <2.0 ug/L 2.0 1 04/10/12 was was <1.0 ug/L 04/10/12 04/10/12 trans-1,2-Dichloroethene 1.0 1 was was 04/10/12 04/10/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/10/12 04/10/12 Diisopropyl Ether 5.0 1 was was Ν 04/10/12 04/10/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/10/12 04/10/12 <1.0 ug/L 1.0 1 was was 04/10/12 04/10/12 t-Butyl Ethyl Ether <5.0 ug/L Ν 1 was was 5.0 Bromochloromethane <1.0 ug/L 04/10/12 04/10/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/10/12 04/10/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/10/12 04/10/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/10/12 04/10/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/10/12 was 04/10/12 was 1.0 04/10/12 04/10/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/10/12 was 04/10/12 was Ν 5.0 04/10/12 04/10/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/10/12 was 04/10/12 was Ν 5.0 Trichloroethene <1.0 ug/L 1.0 04/10/12 was 04/10/12 was 1,2-Dichloropropane <1.0 ug/L 04/10/12 was 04/10/12 was 1.0 <5.0 ug/L 04/10/12 04/10/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/10/12 was 04/10/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/10/12 04/10/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/10/12 was 04/10/12 was Toluene <1.0 ug/L 1 04/10/12 was 04/10/12 was 1.0



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

Trace ID: T12D044-52 Date Collected: 04/06/12 12:15 Matrix: Aqueous Sample ID: 110494EB-3S Date Received: 04/06/12 12:53 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/10/12 04/10/12 trans-1,3-Dichloropropene <1.0 ug/L 1.0 was was <1.0 ug/L 04/10/12 04/10/12 1,1,2-Trichloroethane 1.0 was was Tetrachloroethene <1.0 ug/L 1.0 04/10/12 was 04/10/12 was 2-Hexanone <50 ug/L 04/10/12 04/10/12 50 1 was was Dibromochloromethane <5.0 ug/L 04/10/12 04/10/12 5.0 was was 04/10/12 1,2-Dibromoethane (EDB) <1.0 ug/L 1 04/10/12 was was 1.0 04/10/12 04/10/12 Chlorobenzene <1.0 ug/L 1 was was 1.0 04/10/12 04/10/12 1,1,1,2-Tetrachloroethane <1.0 ug/L 1.0 1 was was 04/10/12 04/10/12 Ethylbenzene <1.0 ug/L 1 was was 1.0 04/10/12 04/10/12 m,p-Xylene <2.0 ug/L 2.0 1 was was Ν 04/10/12 04/10/12 o-Xylene <1.0 ug/L 1.0 1 was was Ν 04/10/12 <3.0 ug/L 04/10/12 Xylenes, total 3.0 1 was was Ν 04/10/12 04/10/12 <1.0 ug/L Styrene 1.0 1 was was 04/10/12 04/10/12 <1.0 ug/L Bromoform 1.0 1 was was 04/10/12 04/10/12 <5.0 ug/L Isopropylbenzene 5.0 1 was was 04/10/12 1,1,2,2-Tetrachloroethane <1.0 ug/L 1 04/10/12 1.0 was was 04/10/12 04/10/12 1,2,3-Trichloropropane <1.0 ug/L was 1.0 1 was 04/10/12 04/10/12 trans-1,4-Dichloro-2-butene <1.0 ug/L 1.0 1 was was Bromobenzene <1.0 ug/L 04/10/12 04/10/12 1 was was 1.0 04/10/12 04/10/12 n-Propylbenzene <1.0 ug/L 1.0 1 was was 1,3,5-Trimethylbenzene <1.0 ug/L 04/10/12 04/10/12 was 1 was 1.0 04/10/12 <1.0 ug/L 04/10/12 was t-Butyl Benzene was 1.0 1,2,4-Trimethylbenzene <1.0 ug/L 04/10/12 was 04/10/12 was 1.0 04/10/12 04/10/12 sec-Butylbenzene <1.0 ug/L 1 was was 1.0 p-Isopropyltoluene <5.0 ug/L 04/10/12 was 04/10/12 was 5.0 04/10/12 04/10/12 1,3-Dichlorobenzene <1.0 ug/L was was 1.0 1,4-Dichlorobenzene <1.0 ug/L 04/10/12 was 04/10/12 was 1.0 04/10/12 04/10/12 n-Butylbenzene <1.0 ug/L was was 1.0 <1.0 ug/L 04/10/12 04/10/12 1,2,3-Trimethylbenzene 1.0 was was Ν <1.0 ug/L 04/10/12 04/10/12 1,2-Dichlorobenzene 1.0 was was 1,2-Dibromo-3-chloropropane <1.0 ug/L 04/10/12 04/10/12 1.0 was Hexachloroethane <5.0 ug/L 1 04/10/12 was 04/10/12 Ν 5.0 was 1,2,4-Trichlorobenzene <5.0 ug/L 1 04/10/12 was 04/10/12 5.0 was Naphthalene <5.0 ug/L 1 04/10/12 was 04/10/12 was Ν 5.0 1,2,3-Trichlorobenzene <5.0 ug/L 04/10/12 was 04/10/12 was 5.0 <5.0 ug/L 04/10/12 04/10/12 2-Methylnaphthalene 1 was was Ν 5.0 Surrogates: 1,2-Dichloroethane-d4 107 % 68-133 04/10/12 was 04/10/12 was

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98 %

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75-120

04/10/12

was

04/10/12

was

Toluene-d8



phonefax

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## **ANALYTICAL RESULTS**

T12D044 Trace Project ID:

Client Project ID: CTY MUS / 110494C

Trace ID: Sample ID:				Collected: Received:	04/06/12 12:15 Matrix: 04/06/12 12:53			Aqueous		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE (	ORGANIC COMPOUNDS	S BY GC-MS								
4-Bromo	ofluorobenzene	83 %	69-119	1	04/10/12	was	04/10/12	was		
1,2-Dich	nlorobenzene-d4	80 %	72-127	1	04/10/12	was	04/10/12	was		



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# **QUALITY CONTROL RESULTS**

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028530

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Zinc, Total Analysis Method: EPA 6010B

#### METHOD BLANK: T028530-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Zinc	mg/kg dry	<1.0	1.0	

#### LABORATORY CONTROL SAMPLE: T028530-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Barium	mg/kg dry	40.0	35.1	88	80-120	
Cadmium	mg/kg dry	40.0	34.2	86	80-120	
Chromium	mg/kg dry	40.0	35.9	90	80-120	
Copper	mg/kg dry	40.0	35.9	90	80-120	
Lead	mg/kg dry	40.0	34.2	86	80-120	
Zinc	mg/kg dry	40.0	34.0	85	80-120	

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028530-MSD1

Original:	T12D044-12
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Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Barium	mg/kg dry	13.6	38.4	50.7	48.7	97	92	75-125	6	20	
Cadmium	mg/kg dry	0	38.4	35.8	35.2	94	92	75-125	3	20	
Chromium	mg/kg dry	3.17	38.4	42.0	39.5	102	95	75-125	8	20	
Copper	mg/kg dry	2.12	38.4	40.4	38.6	100	95	75-125	6	20	
Lead	mg/kg dry	7.47	38.4	42.3	39.9	91	84	75-125	8	20	
Zinc	mg/kg dry	10.8	38.4	47.1	43.4	96	85	75-125	12	20	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028550

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Lead, Total Analysis Method: EPA 6010B



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#### METHOD BLANK: T028550-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Zinc	mg/kg dry	<1.0	1.0	

## LABORATORY CONTROL SAMPLE: T028550-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Barium	mg/kg dry	40.0	34.6	87	80-120	
Cadmium	mg/kg dry	40.0	33.9	85	80-120	
Chromium	mg/kg dry	40.0	35.2	88	80-120	
Copper	mg/kg dry	40.0	35.1	88	80-120	
Lead	mg/kg dry	40.0	33.6	84	80-120	
Zinc	mg/kg dry	40.0	33.5	84	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028550-MSD1					Original: <b>T12D044-28</b>						
Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Barium	mg/kg dry	12.9	38.5	47.0	47.5	91	90	75-125	0.7	20	
Cadmium	mg/kg dry	0	38.5	31.1	33.2	83	86	75-125	4	20	
Chromium	mg/kg dry	3.23	38.5	35.8	38.2	87	91	75-125	5	20	
Copper	mg/kg dry	1.20	38.5	33.6	35.9	86	90	75-125	5	20	
Lead	mg/kg dry	1.22	38.5	31.6	34.0	81	85	75-125	5	20	
Zinc	mg/kg dry	7.69	38.5	39.2	41.3	84	87	75-125	4	20	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028558

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Copper, Total Analysis Method: EPA 6010B

## METHOD BLANK: T028558-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	

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## METHOD BLANK: T028558-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Zinc	mg/kg dry	<1.0	1.0	

## LABORATORY CONTROL SAMPLE: T028558-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Barium	mg/kg dry	40.0	34.0	85	80-120	
Cadmium	mg/kg dry	40.0	33.7	84	80-120	
Chromium	mg/kg dry	40.0	34.5	86	80-120	
Copper	mg/kg dry	40.0	34.4	86	80-120	
Lead	mg/kg dry	40.0	33.2	83	80-120	
Zinc	mg/kg dry	40.0	32.7	82	80-120	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028530

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Selenium, Total

Analysis Method: EPA 6020

#### METHOD BLANK: T028530-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Selenium	mg/kg dry	<0.40	0.40	

# LABORATORY CONTROL SAMPLE: T028530-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	6.05	121	80-120	112
Arsenic	mg/kg dry	5.00	5.06	101	80-120	
Selenium	mg/kg dry	5.00	4.56	91	80-120	

#### Original: T12D044-12 MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028530-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.0293	4.80	6.39	5.96	134	124	75-125	8	20	208
Arsenic	mg/kg dry	0.838	4.80	6.39	6.63	117	121	75-125	3	20	
Selenium	mg/kg dry	0	4.80	4.84	4.68	102	98	75-125	4	20	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C



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QC Batch: T028550

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Silver, Total Analysis Method: EPA 6020

# METHOD BLANK: T028550-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Selenium	mg/kg dry	<0.40	0.40	

#### LABORATORY CONTROL SAMPLE: T028550-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	6.23	125	80-120	112
Arsenic	mg/kg dry	5.00	5.16	103	80-120	
Selenium	mg/kg dry	5.00	4.81	96	80-120	

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028550-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.0108	4.81	5.82	6.23	123	129	75-125	5	20	209
Arsenic	mg/kg dry	0.690	4.81	5.55	5.95	103	109	75-125	6	20	
Selenium	mg/kg dry	0	4.81	4.47	4.90	95	102	75-125	7	20	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028558

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Silver, Total Analysis Method: EPA 6020

Original: T12D044-28

## METHOD BLANK: T028558-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Selenium	mg/kg dry	<0.40	0.40	

#### LABORATORY CONTROL SAMPLE: T028558-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	6.48	130	80-120	112
Arsenic	mg/kg dry	5.00	5.50	110	80-120	
Selenium	mg/kg dry	5.00	5.07	101	80-120	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

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QC Batch: T028530

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Description: Mercury, Total, EPA 7470/7471

Analysis Method: EPA 7471A

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

## LABORATORY CONTROL SAMPLE: T028530-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	ma/ka drv	0.200	0.168	84	77-122	

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028530-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/kg dry	0.0177	0.192	0.162	0.169	76	79	76-123	4	20	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028550

Analysis Description: Mercury, Total, EPA 7470/7471

QC Batch Method: EPA 3051 Microwave Assisted

Digestions for Solids

Analysis Method: EPA 7471A

Original: T12D044-12

#### METHOD BLANK: T028550-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

## LABORATORY CONTROL SAMPLE: T028550-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.168	84	77-122	

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028550-MSD1

	DOI LIGATE.	1020000 11			- 5	-	-				
		Original	Spike	MS	MSD	MS	MSD	% Rec	222	Max	Natas
Parameter	Units	Result	Conc.	Result	Result	% Rec	% Rec	Limit	RPD	RPD	Notes
Mercury	mg/kg dry	0	0.192	0.161	0.168	85	87	76-123	2	20	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028558

Analysis Description: Mercury, Total, EPA 7470/7471

QC Batch Method: EPA 3051 Microwave Assisted

Analysis Method: EPA 7471A

Original: T12D044-28

Digestions for Solids



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## METHOD BLANK: T028558-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

# LABORATORY CONTROL SAMPLE: T028558-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.167	84	77-122	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028525 QC Batch Method: EPA 3550B Ultrasonic Extraction Analysis Description: PNAs Analysis Method: EPA 8270C

## METHOD BLANK: T028525-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
Nitrobenzene-d5 (S)	%	86	36-98	
2-Fluorobiphenyl (S)	%	76	44-105	
Terphenyl-d14 (S)	%	86	46-109	

#### LABORATORY CONTROL SAMPLE: T028525-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Acenaphthene	ug/kg wet	1700	1250	74	52-105	
Pyrene	ug/kg wet	1680	1340	80	47-114	
Nitrobenzene-d5 (S)	%	3330	2530	76	36-98	
2-Fluorobiphenyl (S)	%	3360	2380	71	44-105	
Terphenyl-d14 (S)	%	3490	3000	86	46-109	

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#### Original: **T12D044-12** MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028525-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Acenaphthene	ug/kg dry	0	1790	1580	1180	88	66	46-111	28	31	
Pyrene	ug/kg dry	0	1770	1520	1130	85	64	40-124	29	33	
Nitrobenzene-d5 (S)	%		3510	3090	2710	88	77	36-98			
2-Fluorobiphenyl (S)	%		3550	2940	2320	83	66	44-105			
Terphenyl-d14 (S)	%		3690	3080	2460	83	67	46-109			

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028545 Analysis Description: PNAs QC Batch Method: EPA 3550B Ultrasonic Extraction Analysis Method: EPA 8270C

## METHOD BLANK: T028545-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
Nitrobenzene-d5 (S)	%	85	36-98	
2-Fluorobiphenyl (S)	%	76	44-105	
Terphenyl-d14 (S)	%	79	46-109	

# LABORATORY CONTROL SAMPLE: T028545-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Acenaphthene	ug/kg wet	1690	1370	81	52-105	
Pyrene	ug/kg wet	1680	1350	81	47-114	
Nitrobenzene-d5 (S)	%	3320	2730	82	36-98	
2-Fluorobiphenyl (S)	%	3360	2530	75	44-105	
Terphenyl-d14 (S)	%	3490	2840	81	46-109	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028545-MSD1

Original	: T12	D044-28
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Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Acenaphthene	ug/kg dry	0	1570	1560	1430	99	91	46-111	9	31	
Pyrene	ug/kg dry	19.7	1550	1480	1460	94	93	40-124	2	33	
Nitrobenzene-d5 (S)	%		3080	2770	2670	90	87	36-98			
2-Fluorobiphenyl (S)	%		3110	2590	2410	83	78	44-105			
Terphenyl-d14 (S)	%		3230	2800	2690	87	83	46-109			

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028546 QC Batch Method: EPA 3550B Ultrasonic Extraction Analysis Description: PNAs Analysis Method: EPA 8270C

#### METHOD BLANK: T028546-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
•				
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
Nitrobenzene-d5 (S)	%	82	36-98	
2-Fluorobiphenyl (S)	%	74	44-105	
Terphenyl-d14 (S)	%	77	46-109	

# LABORATORY CONTROL SAMPLE: T028546-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Acenaphthene	ug/kg wet	1700	1250	74	52-105	
Pyrene	ug/kg wet	1680	1310	78	47-114	
Nitrobenzene-d5 (S)	%	3330	2460	74	36-98	
2-Fluorobiphenyl (S)	%	3370	2250	67	44-105	
Terphenyl-d14 (S)	%	3500	2530	72	46-109	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

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Analysis Description: Volatiles, Full MDEQ+ List

Analysis Method: EPA 8260B

# METHOD BLANK: T028561-BLK1

QC Batch Method: EPA 8260B

QC Batch: T028561

Parameter	Units	Blank Result	Reporting Limit	Notes
Dichlorodifluoromethane	ug/L	<5.0	5.0	
Chloromethane	ug/L	<5.0	5.0	
Vinyl chloride	ug/L	<1.0	1.0	
Bromomethane	ug/L	<5.0	5.0	
Chloroethane	ug/L	<5.0	5.0	
Trichlorofluoromethane	ug/L	<1.0	1.0	
Diethyl ether	ug/L	<10	10	
Tert-butyl alcohol	ug/L	<50	50	
1,1-Dichloroethene	ug/L	<1.0	1.0	
Acetone	ug/L	<50	50	
Iodomethane	ug/L	<1.0	1.0	
Carbon disulfide	ug/L	<5.0	5.0	
Methyl-tert-butyl ether	ug/L	<5.0	5.0	
Methylene chloride	ug/L	<5.0	5.0	
Acrylonitrile	ug/L	<2.0	2.0	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	
1,1-Dichloroethane	ug/L	<1.0	1.0	
Diisopropyl Ether	ug/L	<5.0	5.0	
2-Butanone	ug/L	<25	25	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	
t-Butyl Ethyl Ether	ug/L	<5.0	5.0	
Bromochloromethane	ug/L	<1.0	1.0	
Tetrahydrofuran	ug/L	<90	90	
Chloroform	ug/L	<1.0	1.0	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	
Carbon tetrachloride	ug/L	<1.0	1.0	
Benzene	ug/L	<1.0	1.0	
t-Amyl Methyl Ether	ug/L	<5.0	5.0	
1,2-Dichloroethane	ug/L	<1.0	1.0	
Cyclohexane	ug/L	<5.0	5.0	
Trichloroethene	ug/L	<1.0	1.0	
1,2-Dichloropropane	ug/L	<1.0	1.0	
Dibromomethane	ug/L	<5.0	5.0	
Bromodichloromethane	ug/L	<1.0	1.0	
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	
4-Methyl-2-pentanone	ug/L	<50	50	
Toluene	ug/L	<1.0	1.0	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	
Tetrachloroethene	ug/L	<1.0	1.0	
2-Hexanone	ug/L	<50	50	
Dibromochloromethane	ug/L	<5.0	5.0	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	
Chlorobenzene	ug/L	<1.0	1.0	



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#### METHOD BLANK: T028561-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	
Ethylbenzene	ug/L	<1.0	1.0	
n,p-Xylene	ug/L	<2.0	2.0	
o-Xylene	ug/L	<1.0	1.0	
Kylenes, total	ug/L	<3.0	3.0	
Styrene	ug/L	<1.0	1.0	
Bromoform	ug/L	<1.0	1.0	
sopropylbenzene	ug/L	<5.0	5.0	
,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	
,2,3-Trichloropropane	ug/L	<1.0	1.0	
rans-1,4-Dichloro-2-butene	ug/L	<1.0	1.0	
Bromobenzene	ug/L	<1.0	1.0	
-Propylbenzene	ug/L	<1.0	1.0	
,3,5-Trimethylbenzene	ug/L	<1.0	1.0	
Butyl Benzene	ug/L	<1.0	1.0	
,2,4-Trimethylbenzene	ug/L	<1.0	1.0	
ec-Butylbenzene	ug/L	<1.0	1.0	
-Isopropyltoluene	ug/L	<5.0	5.0	
,3-Dichlorobenzene	ug/L	<1.0	1.0	
,4-Dichlorobenzene	ug/L	<1.0	1.0	
-Butylbenzene	ug/L	<1.0	1.0	
,2,3-Trimethylbenzene	ug/L	<1.0	1.0	
,2-Dichlorobenzene	ug/L	<1.0	1.0	
,2-Dibromo-3-chloropropane	ug/L	<1.0	1.0	
lexachloroethane	ug/L	<5.0	5.0	
,2,4-Trichlorobenzene	ug/L	<5.0	5.0	
laphthalene	ug/L	<5.0	5.0	
,2,3-Trichlorobenzene	ug/L	<5.0	5.0	
-Methylnaphthalene	ug/L	<5.0	5.0	
,2-Dichloroethane-d4 (S)	%	95	68-133	
oluene-d8 (S)	%	96	75-120	
-Bromofluorobenzene (S)	%	90	69-119	
1,2-Dichlorobenzene-d4 (S)	%	82	72-127	

# LABORATORY CONTROL SAMPLE: T028561-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
1,1-Dichloroethene	ug/L	20.0	21.8	109	64-156	
Benzene	ug/L	20.0	19.7	99	80-120	
Trichloroethene	ug/L	20.0	20.9	104	69-133	
Toluene	ug/L	20.0	20.3	102	80-120	
Chlorobenzene	ug/L	20.0	20.3	101	80-120	
1,2-Dichloroethane-d4 (S)	%	45.0	42.2	94	68-133	
Toluene-d8 (S)	%	45.0	42.3	94	75-120	
4-Bromofluorobenzene (S)	%	45.0	39.4	88	69-119	
1,2-Dichlorobenzene-d4 (S)	%	45.0	37.5	83	72-127	

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Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028562

QC Batch Method: EPA 5035 Purge-and-Trap for Solids and

Wastes

Analysis Description: Volatiles, Full MDEQ+ List

Analysis Method: EPA 8260B

#### METHOD BLANK: T028562-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dichlorodifluoromethane	ug/kg wet	<250	250	
Chloromethane	ug/kg wet	<250	250	
Vinyl chloride	ug/kg wet	<40	40	
Bromomethane	ug/kg wet	<200	200	
Chloroethane	ug/kg wet	<250	250	
Trichlorofluoromethane	ug/kg wet	<100	100	
Diethyl ether	ug/kg wet	<200	200	
Tert-butyl alcohol	ug/kg wet	<2500	2500	
1,1-Dichloroethene	ug/kg wet	<50	50	
Acetone	ug/kg wet	<1000	1000	
lodomethane	ug/kg wet	<100	100	
Carbon disulfide	ug/kg wet	<250	250	
Methyl-tert-butyl ether	ug/kg wet	<250	250	
Methylene chloride	ug/kg wet	<250	250	
Acrylonitrile	ug/kg wet	<100	100	
trans-1,2-Dichloroethene	ug/kg wet	<50	50	
1,1-Dichloroethane	ug/kg wet	<50	50	
Diisopropyl Ether	ug/kg wet	<250	250	
2-Butanone	ug/kg wet	<750	750	
cis-1,2-Dichloroethene	ug/kg wet	<50	50	
t-Butyl Ethyl Ether	ug/kg wet	<250	250	
Bromochloromethane	ug/kg wet	<100	100	
Tetrahydrofuran	ug/kg wet	<1000	1000	
Chloroform	ug/kg wet	<50	50	
1,1,1-Trichloroethane	ug/kg wet	<50	50	
Carbon tetrachloride	ug/kg wet	<50	50	
Benzene	ug/kg wet	<50	50	
t-Amyl Methyl Ether	ug/kg wet	<250	250	
1,2-Dichloroethane	ug/kg wet	<50	50	
Cyclohexane	ug/kg wet	<250	250	
Trichloroethene	ug/kg wet	<50	50	
1,2-Dichloropropane	ug/kg wet	<50	50	
Dibromomethane	ug/kg wet	<250	250	
Bromodichloromethane	ug/kg wet	<100	100	
cis-1,3-Dichloropropene	ug/kg wet	<50	50	
4-Methyl-2-pentanone	ug/kg wet	<2500	2500	
Toluene	ug/kg wet	<100	100	
trans-1,3-Dichloropropene	ug/kg wet	<50	50	
1,1,2-Trichloroethane	ug/kg wet	<50	50	
Tetrachloroethene	ug/kg wet	<50	50	
2-Hexanone	ug/kg wet	<2500	2500	



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#### METHOD BLANK: T028562-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dibromochloromethane	ug/kg wet	<100	100	
1,2-Dibromoethane (EDB)	ug/kg wet	<50	50	
Chlorobenzene	ug/kg wet	<50	50	
1,1,1,2-Tetrachloroethane	ug/kg wet	<100	100	
Ethylbenzene	ug/kg wet	<50	50	
m,p-Xylene	ug/kg wet	<100	100	
o-Xylene	ug/kg wet	<50	50	
Xylenes, total	ug/kg wet	<150	150	
Styrene	ug/kg wet	<50	50	
Bromoform	ug/kg wet	<100	100	
Isopropylbenzene	ug/kg wet	<250	250	
1,1,2,2-Tetrachloroethane	ug/kg wet	<50	50	
1,2,3-Trichloropropane	ug/kg wet	<100	100	
trans-1,4-Dichloro-2-butene	ug/kg wet	<50	50	
Bromobenzene	ug/kg wet	<100	100	
n-Propylbenzene	ug/kg wet	<100	100	
1,3,5-Trimethylbenzene	ug/kg wet	<100	100	
t-Butyl Benzene	ug/kg wet	<50	50	
1,2,4-Trimethylbenzene	ug/kg wet	<100	100	
sec-Butylbenzene	ug/kg wet	<50	50	
p-Isopropyltoluene	ug/kg wet	<100	100	
1,3-Dichlorobenzene	ug/kg wet	<100	100	
1,4-Dichlorobenzene	ug/kg wet	<100	100	
n-Butylbenzene	ug/kg wet	<50	50	
1,2,3-Trimethylbenzene	ug/kg wet	<50	50	
1,2-Dichlorobenzene	ug/kg wet	<100	100	
1,2-Dibromo-3-chloropropane	ug/kg wet	<100	100	
Hexachloroethane	ug/kg wet	<100	100	
1,2,4-Trichlorobenzene	ug/kg wet	<330	330	
Naphthalene	ug/kg wet	<330	330	
1,2,3-Trichlorobenzene	ug/kg wet	<250	250	
2-Methylnaphthalene	ug/kg wet	<330	330	
1,2-Dichloroethane-d4 (S)	%	95	68-133	
Toluene-d8 (S)	%	96	75-120	
4-Bromofluorobenzene (S)	%	90	69-119	
1,2-Dichlorobenzene-d4 (S)	%	82	72-127	

# LABORATORY CONTROL SAMPLE: T028562-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
1,1-Dichloroethene	ug/kg wet	1000	1090	109	64-156	
Benzene	ug/kg wet	1000	987	99	80-120	
Trichloroethene	ug/kg wet	1000	1040	104	69-133	
Toluene	ug/kg wet	1000	1020	102	80-120	
Chlorobenzene	ug/kg wet	1000	1010	101	80-120	
1,2-Dichloroethane-d4 (S)	%	45.0	42.2	94	68-133	

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## LABORATORY CONTROL SAMPLE: T028562-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Toluene-d8 (S)	%	45.0	42.3	94	75-120	
4-Bromofluorobenzene (S)	%	45.0	39.4	88	69-119	
1,2-Dichlorobenzene-d4 (S)	%	45.0	37.5	83	72-127	

#### Original: T12D044-12 MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028562-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
1,1-Dichloroethene	ug/kg dry	0	890	1010	979	113	110	60-146	3	15	
Benzene	ug/kg dry	0	890	952	918	107	103	78-114	4	11	
Trichloroethene	ug/kg dry	0	890	985	1020	111	114	70-117	3	14	
Toluene	ug/kg dry	0	890	1050	1060	118	120	77-118	1	10	209
Chlorobenzene	ug/kg dry	0	890	1040	1040	117	117	75-116	0.3	12	230
1,2-Dichloroethane-d4 (S)	%		45.0	41.5	40.1	92	89	68-133			
Toluene-d8 (S)	%		45.0	45.3	42.4	101	94	75-120			
4-Bromofluorobenzene (S)	%		45.0	42.0	40.6	93	90	69-119			
1,2-Dichlorobenzene-d4 (S)	%		45.0	39.4	38.8	88	86	72-127			

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028582

QC Batch Method: EPA 5035 Purge-and-Trap for Solids and

Wastes

Analysis Description: Volatiles, Full MDEQ+ List

Analysis Method: EPA 8260B

## METHOD BLANK: T028582-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dichlorodifluoromethane	ug/kg wet	<250	250	
Chloromethane	ug/kg wet	<250	250	
Vinyl chloride	ug/kg wet	<40	40	
Bromomethane	ug/kg wet	<200	200	
Chloroethane	ug/kg wet	<250	250	
Trichlorofluoromethane	ug/kg wet	<100	100	
Diethyl ether	ug/kg wet	<200	200	
Tert-butyl alcohol	ug/kg wet	<2500	2500	
1,1-Dichloroethene	ug/kg wet	<50	50	
Acetone	ug/kg wet	<1000	1000	
lodomethane	ug/kg wet	<100	100	
Carbon disulfide	ug/kg wet	<250	250	
Methyl-tert-butyl ether	ug/kg wet	<250	250	
Methylene chloride	ug/kg wet	<250	250	
Acrylonitrile	ug/kg wet	<100	100	
trans-1,2-Dichloroethene	ug/kg wet	<50	50	
1,1-Dichloroethane	ug/kg wet	<50	50	
Diisopropyl Ether	ug/kg wet	<250	250	
2-Butanone	ug/kg wet	<750	750	

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## METHOD BLANK: T028582-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
cis-1,2-Dichloroethene	ug/kg wet	<50	50	
-Butyl Ethyl Ether	ug/kg wet	<250	250	
Bromochloromethane	ug/kg wet	<100	100	
etrahydrofuran	ug/kg wet	<1000	1000	
hloroform	ug/kg wet	<50	50	
,1,1-Trichloroethane	ug/kg wet	<50	50	
Carbon tetrachloride	ug/kg wet	<50	50	
enzene	ug/kg wet	<50	50	
Amyl Methyl Ether	ug/kg wet	<250	250	
2-Dichloroethane	ug/kg wet	<50	50	
yclohexane	ug/kg wet	<250	250	
richloroethene	ug/kg wet	<50	50	
,2-Dichloropropane	ug/kg wet	<50	50	
ibromomethane	ug/kg wet	<250	250	
romodichloromethane	ug/kg wet	<100	100	
s-1,3-Dichloropropene	ug/kg wet	<50	50	
-Methyl-2-pentanone	ug/kg wet	<2500	2500	
oluene	ug/kg wet	<100	100	
ans-1,3-Dichloropropene	ug/kg wet	<50	50	
1,2-Trichloroethane	ug/kg wet	<50	50	
etrachloroethene	ug/kg wet	<50	50	
Hexanone	ug/kg wet	<2500	2500	
bromochloromethane	ug/kg wet	<100	100	
2-Dibromoethane (EDB)	ug/kg wet	<50	50	
nlorobenzene	ug/kg wet	<50	50	
1,1,2-Tetrachloroethane	ug/kg wet	<100	100	
:hylbenzene		<50	50	
,p-Xylene	ug/kg wet	<100		
Xylene	ug/kg wet	<50	100	
•	ug/kg wet		50	
/lenes, total	ug/kg wet	<150	150	
yrene	ug/kg wet	<50	50	
romoform	ug/kg wet	<100	100	
opropylbenzene	ug/kg wet	<250	250	
1,2,2-Tetrachloroethane	ug/kg wet	<50	50	
2,3-Trichloropropane	ug/kg wet	<100	100	
ans-1,4-Dichloro-2-butene	ug/kg wet	<50	50	
romobenzene	ug/kg wet	<100	100	
Propylbenzene	ug/kg wet	<100	100	
3,5-Trimethylbenzene	ug/kg wet	<100	100	
Butyl Benzene	ug/kg wet	<50	50	
2,4-Trimethylbenzene	ug/kg wet	<100	100	
ec-Butylbenzene	ug/kg wet	<50	50	
Isopropyltoluene	ug/kg wet	<100	100	
3-Dichlorobenzene	ug/kg wet	<100	100	
4-Dichlorobenzene	ug/kg wet	<100	100	
Butylbenzene	ug/kg wet	<50	50	
2,3-Trimethylbenzene	ug/kg wet	<50	50	
2-Dichlorobenzene	ug/kg wet	<100	100	



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#### METHOD BLANK: T028582-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
1,2-Dibromo-3-chloropropane	ug/kg wet	<100	100	
Hexachloroethane	ug/kg wet	<100	100	
1,2,4-Trichlorobenzene	ug/kg wet	<330	330	
Naphthalene	ug/kg wet	<330	330	
1,2,3-Trichlorobenzene	ug/kg wet	<250	250	
2-Methylnaphthalene	ug/kg wet	<330	330	
1,2-Dichloroethane-d4 (S)	%	103	68-133	
Toluene-d8 (S)	%	101	75-120	
4-Bromofluorobenzene (S)	%	85	69-119	
1,2-Dichlorobenzene-d4 (S)	%	85	72-127	

# LABORATORY CONTROL SAMPLE: T028582-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
1,1-Dichloroethene	ug/kg wet	1000	1320	132	64-156	
Benzene	ug/kg wet	1000	1030	103	80-120	
Trichloroethene	ug/kg wet	1000	1030	103	69-133	
Toluene	ug/kg wet	1000	1150	115	80-120	
Chlorobenzene	ug/kg wet	1000	1120	112	80-120	
1,2-Dichloroethane-d4 (S)	%	45.0	47.0	104	68-133	
Toluene-d8 (S)	%	45.0	43.6	97	75-120	
4-Bromofluorobenzene (S)	%	45.0	38.9	86	69-119	
1,2-Dichlorobenzene-d4 (S)	%	30.0	37.6	125	72-127	

MATRIX SPIKE / MATRIX SPI	KE DUPLICATE:	T028582-M	ISD1	D1 Original: T12D044-28							
Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
1,1-Dichloroethene	ug/kg dry	0	781	952	933	122	120	60-146	2	15	
Benzene	ug/kg dry	0	781	763	777	98	100	78-114	2	11	
Trichloroethene	ug/kg dry	0	781	772	834	99	107	70-117	8	14	
Toluene	ug/kg dry	13.3	781	849	835	107	105	77-118	2	10	
Chlorobenzene	ug/kg dry	0	781	827	842	106	108	75-116	2	12	
1,2-Dichloroethane-d4 (S)	%		45.0	45.2	46.5	100	103	68-133			
Toluene-d8 (S)	%		45.0	44.2	44.8	98	100	75-120			
4-Bromofluorobenzene (S)	%		45.0	37.9	37.9	84	84	69-119			
1,2-Dichlorobenzene-d4 (S)	%		30.0	37.6	37.2	125	124	72-127			

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028583 Analysis Description: Volatiles, Full MDEQ+ List

QC Batch Method: EPA 8260B Analysis Method: EPA 8260B



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## METHOD BLANK: T028583-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dichlorodifluoromethane	ug/L	<5.0	5.0	
Chloromethane	ug/L	<5.0	5.0	
'inyl chloride	ug/L	<1.0	1.0	
Bromomethane	ug/L	<5.0	5.0	
Chloroethane	ug/L	<5.0	5.0	
richlorofluoromethane	ug/L	<1.0	1.0	
Diethyl ether	ug/L	<10	10	
ert-butyl alcohol	ug/L	<50	50	
,1-Dichloroethene	ug/L	<1.0	1.0	
Acetone	ug/L	<50	50	
odomethane	ug/L	<1.0	1.0	
Carbon disulfide	ug/L	<5.0	5.0	
Methyl-tert-butyl ether	ug/L	<5.0	5.0	
Methylene chloride	ug/L	<5.0	5.0	
crylonitrile	ug/L	<2.0	2.0	
rans-1,2-Dichloroethene	ug/L	<1.0	1.0	
,1-Dichloroethane	ug/L	<1.0	1.0	
Diisopropyl Ether	ug/L	<5.0	5.0	
-Butanone	ug/L	<25	25	
is-1,2-Dichloroethene	ug/L	<1.0	1.0	
Butyl Ethyl Ether	ug/L	<5.0	5.0	
romochloromethane	ug/L	<1.0	1.0	
etrahydrofuran	ug/L	<90	90	
hloroform	ug/L	<1.0	1.0	
,1,1-Trichloroethane	ug/L	<1.0	1.0	
arbon tetrachloride	ug/L	<1.0	1.0	
Benzene		<1.0	1.0	
Amyl Methyl Ether	ug/L	<5.0	5.0	
,2-Dichloroethane	ug/L	<1.0		
cyclohexane	ug/L	<5.0	1.0 5.0	
-	ug/L			
richloroethene	ug/L	<1.0	1.0	
,2-Dichloropropane	ug/L	<1.0 <5.0	1.0	
Dibromomethane	ug/L		5.0	
romodichloromethane	ug/L	<1.0	1.0	
s-1,3-Dichloropropene	ug/L	<1.0	1.0	
-Methyl-2-pentanone	ug/L	<50	50	
oluene	ug/L	<1.0	1.0	
ans-1,3-Dichloropropene	ug/L 	<1.0	1.0	
1,2-Trichloroethane	ug/L 	<1.0	1.0	
etrachloroethene	ug/L	<1.0	1.0	
Hexanone	ug/L	<50	50	
ibromochloromethane	ug/L	<5.0	5.0	
,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	
thlorobenzene	ug/L	<1.0	1.0	
,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	
thylbenzene	ug/L	<1.0	1.0	
n,p-Xylene	ug/L	<2.0	2.0	

# **CERTIFICATE OF ANALYSIS**



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### METHOD BLANK: T028583-BLK1

	Units	Result	Reporting Limit	Notes
o-Xylene	ug/L	<1.0	1.0	
Xylenes, total	ug/L	<3.0	3.0	
Styrene	ug/L	<1.0	1.0	
Bromoform	ug/L	<1.0	1.0	
Isopropylbenzene	ug/L	<5.0	5.0	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	
trans-1,4-Dichloro-2-butene	ug/L	<1.0	1.0	
Bromobenzene	ug/L	<1.0	1.0	
n-Propylbenzene	ug/L	<1.0	1.0	
1,3,5-Trimethylbenzene	ug/L	<1.0	1.0	
t-Butyl Benzene	ug/L	<1.0	1.0	
1,2,4-Trimethylbenzene	ug/L	<1.0	1.0	
sec-Butylbenzene	ug/L	<1.0	1.0	
p-Isopropyltoluene	ug/L	<5.0	5.0	
1,3-Dichlorobenzene	ug/L	<1.0	1.0	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	
n-Butylbenzene	ug/L	<1.0	1.0	
1,2,3-Trimethylbenzene	ug/L	<1.0	1.0	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	1.0	
Hexachloroethane	ug/L	<5.0	5.0	
1,2,4-Trichlorobenzene	ug/L	<5.0	5.0	
Naphthalene	ug/L	<5.0	5.0	
1,2,3-Trichlorobenzene	ug/L	<5.0	5.0	
2-Methylnaphthalene	ug/L	<5.0	5.0	
1,2-Dichloroethane-d4 (S)	%	103	68-133	
Toluene-d8 (S)	%	101	75-120	
4-Bromofluorobenzene (S)	%	85	69-119	
1,2-Dichlorobenzene-d4 (S)	%	85	72-127	

## LABORATORY CONTROL SAMPLE: T028583-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
1,1-Dichloroethene	ug/L	20.0	26.4	132	64-156	
Benzene	ug/L	20.0	20.7	103	80-120	
Trichloroethene	ug/L	20.0	20.6	103	69-133	
Toluene	ug/L	20.0	22.9	115	80-120	
Chlorobenzene	ug/L	20.0	22.4	112	80-120	
1,2-Dichloroethane-d4 (S)	%	45.0	47.0	104	68-133	
Toluene-d8 (S)	%	45.0	43.6	97	75-120	
4-Bromofluorobenzene (S)	%	45.0	38.9	86	69-119	
1,2-Dichlorobenzene-d4 (S)	%	30.0	37.6	125	72-127	

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

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QC Batch: T028486 QC Batch Method: % Solids Analysis Description: Solids, Dry Weight Analysis Method: % Calculation

SAMPLE DUPLICATE: T028486-DUP1 Original: T12D044-12

DUP Original Max RPD Notes Parameter Units RPD Result Result 94.6 92.7 2 20 % Solids % by Wt.

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028513 Analysis Description: Solids, Dry Weight QC Batch Method: % Solids Analysis Method: % Calculation

SAMPLE DUPLICATE: T028513-DUP1 Original: T12D044-28

DUP Original Max Parameter Units Result **RPD** Notes Result **RPD** % Solids % by Wt. 108 97.8 10 20

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028576 Analysis Description: Solids, Dry Weight QC Batch Method: % Solids Analysis Method: % Calculation

Original: T12D044-36 **SAMPLE DUPLICATE: T028576-DUP1** 

Original DUP Max RPD Units Notes Parameter Result Result **RPD** % Solids % by Wt. 99.2 98.7 0.5 20

Trace Project ID: T12D044

Client Project ID: CTY MUS / 110494C

QC Batch: T028629 Analysis Description: Solids, Dry Weight QC Batch Method: % Solids Analysis Method: % Calculation



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Standard
3-4 Day (RUSH)\*
24-48 Hour (RUSH)\* Yes Page\_ Requires prior approval ANALYSIS REQUESTED МеОН 8 RECEIVED BY MOT Level Preservative Checked: Checked By: Cl Lab W = Water
SE = Sediment
OI = Oil
SO = Solid Waste S = Soil Matrix Key Sampling Time: **LHOCK!** DATE REMARKS TRACE ID NO Yes WI = Wipes LW = Liquid Waste A = AirSL = SludgeD = Drinking Water 8 TIME N/A Possible Health Hazard



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MERA TMDL's

Drinking Water

NPDES

USACE

Special + & COPIUS TRACE USE ONLY 4 3 PURIS Soil Volatiles Preserved: Received on ice: Logged By: RELEASED BY + THE COMMETER ST なら Standard
3-4 Day (RUSH)\*
24-48 Hour (RUSH)\* Yes Turnaround Requirements Requires prior approval ANALYSIS REQUESTED MeOH / Low Level 8 RECEIVED BY Preservative Checked: Checked By: Lab W = Water SE = Sediment OI = Oil S = SoilSO = Solid Waste Matrix Key Sampling Time: MS/MSD collected 190044 REMARKS TRACE ID NO. Yes D = Drinking Water SL = Sludge LW = Liquid Waste A = Air 8 TIME N/A Possible Health Hazard



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MERA TMDL's
Drinking Water
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USACE TRACE USE ONLY 8260 Pla 4  $\mathfrak{S}$ Soil Volatiles Preserved: Logged By: Prexis Received on ice: + + RELEASED BY THE LO METALS + + + + + Yes Turnaround Requirements
Standard
3-4 Day (RUSH)\* 24-48 Hour (RUSH)\* 3-4 Day (RUSH)\* Requires prior approval ANALYSIS REQUESTED MeOH 8 MOT RECEIVED / Level Preservative Checked: Checked By В Lab SE = Sediment
OI = Oil
SO = Solid Waste S = SoilMatrix Key Sampling  $\overline{\mathcal{Q}}$ TRACE ID NO DATE REMARKS Time: DOY! Yes A = AirSL = Sludge D = Drinking Water LW = Liquid 8 TIME N. Waste Possible Health Hazard



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3-4 Day (RUSH)\* Page\_ Requires prior approval ANALYSIS REQUESTED MeOH  $\frac{8}{6}$ RECEIVED BY Low Level Preservative Checked: Checked By: Lab SE = Sediment
OI = Oil
SO = Solid Waste S = Soil Matrix Key Sampling Time: REMARKS TRACE ID NO. hhad ( Yes SL = Sludge D = Drinking Water LW = Liquid 8 TIME ¥. Possible Health Hazard



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USACE Drinking Water NPDES USACE Special + TRACE USE ONLY 8260 Plys <u>4</u>  $\omega$ + + Soil Volatiles Preserved: Received on ice: Logged By: Prais RELEASED BY 7 + MZ 10 netals Turnaround Requirements
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3-4 Day (RUSH)\*
24-48 Hour (RUSH)\* Yes Requires prior approval ANALYSIS REQUESTED MeOH š RECEIVED Low Level Preservative Checked: Checked By: Lab S = Soil
W = Water
SE = Sediment
OI = Oil
SO = Soild Waste Matrix\_Key Sampling Time: ものでしょう REMARKS TRACE ID NO Yes LW = Liquid ' SL = Sludge D = Drinking Water 8 TIME Waste Ā Possible Health Hazard



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Pleas	e Sign	1		Re	ques	st fo	r Ana	alytic	cal Se	rvices		E	3ill 7	Го:		F	Repo	ort R	lesu	lts 7	Го:		1
	# #	Ī								52	TRACE NO.	Attn:	City, SI	Billing .	Project	Cell #:	Email,	Phone:	City, s	Mailing	Contac	Client Name:	7
2)										4/6/12	DATE		City, State, Zip Code_	Billing Address (if different)	Project Name & #:	265	Email Address: d.s.		City, State, Zip Code:	Mailing Address:	Contact Person: 0		the science
Word	ED BY									12159	TAKEN  METALS FIEL FILTERED	D		ent)	<b>CTYMUS</b>	115-1011	egmbe.	269-342-1100	Kalamaroa	2960 I	Dave Stegme	Envirolosic	the science of compliance
OT IVE ZNAVA	RECEIVED BY		:							HOUSHE	CLIE	Phone:			DIS/MOY94C		dsteambe envirologic com	Fax:	HZ	Interstate Par	26	rc Technologres	phone 231.773.5998 toll-free 800.733.5998 fax 231.773.6537
Libila A										EB-35	CLIENT SAMPLE ID	PO #:			1,		3	269-34	8706h	Parkway		el	22 T)
(Cr.p1	TIME		:							3	MATRIX NUMBER OF CONTAINERS					Sampled by Robert Webster		Sh6h-e					Trace Analytical Laboratories, Inc. 2241 Black Creek Road Muskegon, MI 49444-2673
4) 3)										A)	CONTAINERS			1		Special	NPDES	MERA TMDL's	Regulatory Regu	ŀ		USE Receive	e.a., Inc.
	RELEASED BY											4					] [] [ ; 24				Soil Volatiles Preserved:	Received on ice: Yes	W C
	RECEIVED BY														ANALYSIS RE	* Hequires prior approval	18 Hour (RUSH)*	Standard Standard	paround Beguirement	-	MeOH Low Lev	)No Pre	Pageof
	ED BY														QUESTED	OI = Oil SO = Solid Waste					vel Lab Sampli	Preservative Checked:	Checked By:
	DATE										REMARKS		\	\ \ \				WI = Wipes			Sampling Time:	Yes	HODE
	TIME										Possible					D = Drinking Water SL = Sludge	LW = Liquid Waste A = Air	Vipes				No N/A	1



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# SAMPLE LOG IN CHECKLIST

Date: 4/4/12 Clie	ent Name: En U/1	0/01/CTCel # of Co	polers:
-	ect Name: Cfy	n. 5/2	ler #s:
Log	iged in by: Port		ler #s:
	Cooler Rece		01 113.
	Trace courier	F-	
Cooler/samples delivered by:	Hand delivered	Name of delivery person:	
Con	mmercial courier		D EX US Mail
Did cooler come with a bill of lading?	No	Not Applicable	
	Yes	Way Bill or Tracking #:	
COC Seals present and intact on cooler? No	Nc	t Applicable	
Yes [			
Custody seals signed by Client? No	Client cus	tody seal # (if applicable):	
Yes			
	Coolant and Temp	erature .	
Type of Coolant Used	Co	oler Temperature Correction	on Factor +0.2°C
Yes	No	Date: 4/4/12 Time: 16	oi3/
Slurry w/ crushed, cubed, or chip ice?		Temperature Blank:	°C
Multiple bags of ice around samples?		Range of 3 samples:	8,10 °C
Ice Packs/ Blue Ice :		Melt Water:	°C
No Coolant Present:		till present upon receipt: X Yes	No
	General		
			Yes No NA
	taped to inside of cooler lid	***************************************	
All bottles arrived unbroken w	ith labels in good condition it is in a sealed plastic bag	***************************************	
	abels filled out completely	7	
	th Chain of Custody (COC)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
	nple to run tests requested	***************************************	
pH checked	and samples at correct pH		
	ervative added to samples	?	
DRO/GRO samples received and appropriate		***************************************	
	pubbles absent from VOAs	***************************************	
	operly and signed by client?		
	TRACE sample custodian? ed and samples discussed?		
Contact:	d and samples discussed.		
Contact.		Date:	
lotes:			
		·	
Form 70-A.8 Effective 10/26/11		TRACE Analytica	l Laboratories, Inc.



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## SAMPLE LOG IN CHECKLIST

Date: 4(5(1)	Client Name: Enviro 10-	ric led # of Coolers:	
Trace ID #: TIDDO44	Project Name: Uty Mu	Cooler #s:	
	Logged in by: Power	Cooler #s:	
	Cooler Receipt		
	Trace courier		
Cooler/samples delivered by:		ame of delivery person:	
		UPS DHL FED EX US Ma	ail
Did cooler come with a bill of lading?	No Yes/	Not Applicable Way Bill or Tracking #:	
COC Seals present and intact on cooler?	No Not Appli	cable ,	
Custody seals signed by Client?	No Client custody s	eal # (if applicable):	
	Yes		
	Coolant and Temperate		
Type of Coolant Us	sed Cooler	Temperature Correction Factor e: 니らし <sub>Time:</sub> しろう	_°C
Slurry w/ crushed, cubed, or chip ice		re: Time: emperature Blank: °C	
Multiple bags of ice around samples		ange of 3 samples: 1, 2 °C	
Ice Packs/ Blue Ice		Melt Water: °C	_
No Coolant Present:		esent upon receipt: Yes No	
**************************************	General		
Each san  All bottle labels  Suffi pH  Cor  DRO/GRO samples received and a  COC fille  COC sign	Labels filled out completely?  Labels filled out completely?  agree with Chain of Custody (COC)?  icient sample to run tests requested?  checked and samples at correct pH?  rrect preservative added to samples?  appropriate check in form completed?		
lotes:	<u>,                                     </u>		
	······································		



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## SAMPLE LOG IN CHECKLIST

Date: 4/6/12 Client Name: Em	Dirologic Tech # of Coolers:
Trace ID #: 12 DOUL Project Name: CT	V MUSK 110494C Cooler #s:
Logged in by:	Cooler #s:
	Receipt
Trace courier	
Cooler/samples delivered by: Hand delivered	Name of delivery person:
Commercial courier	UPS DHL FED EX US Mail
Did cooler come with a bill of lading?	Not Applicable
Yes	Way Bill or Tracking #:
COC Seals present and intact on cooler? No	Not Applicable
Yes	
Custody seals signed by Client? No	Client custody seal # (if applicable):
Yes	
	Temperature
Type of Coolant Used	Cooler Temperature Correction Factor 0, 2°C
Slurry w/ crushed, cubed, or chip ice?	Date: 4 (61) Time: 12'53 Temperature Blank: 1 C
Multiple bags of ice around samples?	100
Ice Packs/ Blue Ice :	Range of 3 samples: / / 🗸 °C  Melt Water: °C
No Coolant Present:	Ice still present upon receipt: Yes No
	neral
GC//	
COC taped to inside of	cooler lid?
All bottles arrived unbroken with labels in good	
Each sample point is in a sealed plant	
Labels filled out co	
All bottle labels agree with Chain of Custon	
Sufficient sample to run tests re pH checked and samples at co	
Correct preservative added to	
DRO/GRO samples received and appropriate check in form or	·
Air bubbles absent fro	
COC filled out properly and signed	by client?
	ustodian?
Was project manager called and samples di	scussed?
Contact:	Date:
Notes:	
<u></u>	
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April 18, 2012

Mr. David Stegink Envirologic Technologies, Inc. 2960 Interstate Parkway Kalamazoo, MI 49048

Phone: (269) 342-1100 Fax: (269) 342-4945

RE: Trace Project T12D101

> Client Project VBCBRA / 110494C

Dear Mr. Stegink:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink Project Manager

**Enclosures** 





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## **SAMPLE SUMMARY**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T12D101-01	Trip Blank	Water	rw	04/10/12	04/10/12 16:37
T12D101-02	110494GSB-21 (10-15')	Water	rw	04/10/12 11:15	04/10/12 16:37
T12D101-03	110494GSB-23 (10-15')	Water	rw	04/10/12 11:50	04/10/12 16:37
T12D101-04	110494GSB-24 (10-15')	Water	rw	04/10/12 12:25	04/10/12 16:37
T12D101-05	110494GSB-25 (10-15')	Water	rw	04/10/12 12:55	04/10/12 16:37
T12D101-06	110494GSB-26 (10-15')	Water	rw	04/10/12 13:40	04/10/12 16:37
T12D101-07	110494GSB-2 (10-15')	Water	rw	04/10/12 14:10	04/10/12 16:37
T12D101-08	110494EB-1GW	Water	rw	04/10/12 14:40	04/10/12 16:37
T12D101-09	110494M-1GW	Water	rw	04/10/12	04/10/12 16:37



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### AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

## **DEFINITIONS**

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate
RPD Relative Percent Difference

DUP Matrix Duplicate

RDL Reporting Detection Limit
MCL Maximum Contamination Limit
TIC Tentatively Identified Compound

<, ND or U Indicates the compound was analyzed for but not detected

\* Indicates a result that exceeds its associated MCL or Surrogate control limits

N Indicates that the compound has not been evaluated by NELAC

NA Indicates that the compound is not available.

### **DATA QUALIFIERS**

Trace ID: T028632-MS1	
Analysis: EPA 8260B	
Trichloroethene	Note 208: The MS recovery was out of control. Because the MSD recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Trace ID: T028632-MSD1	
Analysis: EPA 8260B	
Trichloroethene	Note 208: The MS recovery was out of control. Because the MSD recovery and the RPD between the MS and the MSD were in control, no data require qualification.



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

T12D101-01 04/10/12 Trace ID: Date Collected: Matrix: Water Sample ID: Trip Blank Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 5.0 was was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was

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<1.0 ug/L

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1.0

1

04/12/12

was

04/12/12

was

Toluene



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

race ID: T12D10 sample ID: Trip Bla				collected:	04/10/12 04/10/12 16:3	37	Matrix:	Water		
ARAMETERS		RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANI	C COMPOUNDS									
trans-1,3-Dichloropr	ropene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,2-Trichloroethar	ne	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Tetrachloroethene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
2-Hexanone		<50 ug/L	50	1	04/12/12	was	04/12/12	was		
Dibromochlorometh	ane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromoethane	(EDB)	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Chlorobenzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,1,2-Tetrachloroe	ethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Ethylbenzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
m,p-Xylene		<2.0 ug/L	2.0	1	04/12/12	was	04/12/12	was	N	
o-Xylene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
Xylenes, total		<3.0 ug/L	3.0	1	04/12/12	was	04/12/12	was	N	
Styrene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromoform		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Isopropylbenzene		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,1,2,2-Tetrachloroe	ethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trichloropropa	ane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
trans-1,4-Dichloro-2	-butene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromobenzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Propylbenzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,3,5-Trimethylbenz	ene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
t-Butyl Benzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,4-Trimethylbenz	ene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
sec-Butylbenzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
p-Isopropyltoluene		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,3-Dichlorobenzen	e	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,4-Dichlorobenzen		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Butylbenzene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trimethylbenz	ene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
1,2-Dichlorobenzen		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	-	
1,2-Dibromo-3-chlor		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Hexachloroethane		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,4-Trichlorobenze	ene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
Naphthalene		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,3-Trichlorobenze	ene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	• •	
2-Methylnaphthalen		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
Surrogates:	•	0.0 dg/L	3.0	•	J		J L L		. •	
1,2-Dichloroethan	e-d4	115 %	68-133	1	04/12/12	was	04/12/12	was		
Toluene-d8	~ ~ ·	100 %	75-120	1	04/12/12	was	04/12/12	was		

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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-01 Trip Blank			Collected:	04/10/12 04/10/12 16:	37	Matrix:	Water		
PARAMETER	es .	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE (	ORGANIC COMPOL	JNDS BY GC-MS								
4-Bromo	fluorobenzene	78 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	lorobenzene-d4	91 %	72-127	1	04/12/12	was	04/12/12	was		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-02 Date Collected: 04/10/12 11:15 Matrix: Water Sample ID: 110494GSB-21 (10-15') Date Received: 04/10/12 16:37

PREPARED **PARAMETERS RESULTS UNITS** RDL DILUTION BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was Toluene <1.0 ug/L 1 04/12/12 was 04/12/12 was

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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-02 Date Collected: 04/10/12 11:15 Matrix: Water Sample ID: 110494GSB-21 (10-15') Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/12/12 04/12/12 trans-1,3-Dichloropropene <1.0 ug/L was was 1.0 <1.0 ug/L 04/12/12 04/12/12 1,1,2-Trichloroethane 1.0 was was Tetrachloroethene <1.0 ug/L 1.0 04/12/12 was 04/12/12 was 2-Hexanone <50 ug/L 04/12/12 04/12/12 50 1 was was Dibromochloromethane <5.0 ug/L 04/12/12 04/12/12 5.0 was was 1,2-Dibromoethane (EDB) <1.0 ug/L 1 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Chlorobenzene <1.0 ug/L 1 was was 1.0 04/12/12 04/12/12 1,1,1,2-Tetrachloroethane <1.0 ug/L 1.0 1 was was 04/12/12 04/12/12 Ethylbenzene <1.0 ug/L 1 was was 1.0 04/12/12 04/12/12 m,p-Xylene <2.0 ug/L 2.0 1 was was Ν 04/12/12 04/12/12 o-Xylene <1.0 ug/L 1 was was Ν 1.0 <3.0 ug/L 04/12/12 04/12/12 Xylenes, total 3.0 1 was was Ν 04/12/12 04/12/12 <1.0 ug/L Styrene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L Bromoform 1.0 1 was was 04/12/12 04/12/12 <5.0 ug/L Isopropylbenzene 5.0 1 was was 1,1,2,2-Tetrachloroethane <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 04/12/12 04/12/12 1,2,3-Trichloropropane <1.0 ug/L was 1.0 1 was 04/12/12 trans-1,4-Dichloro-2-butene 04/12/12 <1.0 ug/L 1.0 1 was was Bromobenzene <1.0 ug/L 04/12/12 04/12/12 1 was was 1.0 04/12/12 04/12/12 n-Propylbenzene <1.0 ug/L 1.0 1 was was 1,3,5-Trimethylbenzene <1.0 ug/L 04/12/12 04/12/12 1 was was 1.0 <1.0 ug/L 04/12/12 04/12/12 t-Butyl Benzene was was 1.0 1,2,4-Trimethylbenzene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 sec-Butylbenzene <1.0 ug/L 1 was was 1.0 p-Isopropyltoluene <5.0 ug/L 04/12/12 was 04/12/12 was 5.0 04/12/12 04/12/12 1,3-Dichlorobenzene <1.0 ug/L was was 1.0 1,4-Dichlorobenzene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 n-Butylbenzene <1.0 ug/L was was 1.0 <1.0 ug/L 04/12/12 04/12/12 1,2,3-Trimethylbenzene 1.0 was was Ν <1.0 ug/L 04/12/12 04/12/12 1,2-Dichlorobenzene 1.0 was was 1,2-Dibromo-3-chloropropane <1.0 ug/L 04/12/12 04/12/12 1.0 was was Hexachloroethane <5.0 ug/L 1 04/12/12 was 04/12/12 Ν 5.0 was 1,2,4-Trichlorobenzene <5.0 ug/L 1 04/12/12 04/12/12 5.0 was was Naphthalene <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 1,2,3-Trichlorobenzene <5.0 ug/L 04/12/12 was 04/12/12 was 5.0 <5.0 ug/L 04/12/12 04/12/12 2-Methylnaphthalene 1 was was Ν 5.0 Surrogates: 1,2-Dichloroethane-d4 122 % 68-133 04/12/12 was 04/12/12 was

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Toluene-d8



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-02 110494GSB-21 (10-15')			Collected: Received:	04/10/12 11:1 04/10/12 16:3		Matrix:	Water		
PARAMETEI	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
VOLATILE	ORGANIC COMPOUNDS BY	GC-MS								
4-Brom	ofluorobenzene	77 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dicl	hlorobenzene-d4	88 %	72-127	1	04/12/12	was	04/12/12	was		
	ATILE ORGANIC COMPOUNI	OS BY GC-MS								
	T028568									
Naphthale	ene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
2-Methyln	naphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenapht	hylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenapht	hene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Phenanth	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Anthracer	ne	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluoranth	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Chrysene	•	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (b)	) fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	) pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Indeno (1	,2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Dibenz (a	n,h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Benzo (g,	h,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Surrogate	es:									
Nitrobe	nzene-d5	63 %	36-103	1	04/11/12	kb	04/13/12	avl		
	a hinh any l	62 %	36-119	1	04/11/12	kb	04/13/12	avl		
2-Fluore	obiprieriyi	02 70	30-119		04/11/12	KD	04/13/12	avi		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-02 Date Collected: 04/10/12 11:15 Matrix: Water Sample ID: 110494GSB-21 (10-15') Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY ANALYZED BY **NOTES** MCL **METALS, DISSOLVED** Analysis Method: EPA 6020 Batch: T028659 <0.0050 mg/L 04/16/12 jd 04/17/12 jd Arsenic 1 0.0050 Barium <0.10 mg/L 1 04/16/12 jd 04/17/12 jd 0.10 <0.0010 mg/L 04/16/12 04/17/12 Cadmium jd jd 1 0.0010 <0.010 mg/L Chromium 04/16/12 jd 04/17/12 jd 0.010 Copper <0.0040 mg/L 1 04/16/12 jd 04/17/12 jd 0.0040 jd Lead <0.0030 mg/L 0.0030 04/16/12 04/17/12 jd <0.0050 mg/L 04/16/12 04/17/12 Selenium 0.0050 1 jd jd Silver 0.00041 mg/L 04/16/12 jd 04/17/12 jd 0.00020 Zinc <0.15 mg/L 04/16/12 jd 04/17/12 jd 0.15 Analysis Method: EPA 7470A Batch: T028596 Mercury <0.00020 mg/L 0.00020 04/12/12 ns 04/13/12 jd



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#### ANALYTICAL RESULTS

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-03 Date Collected: 04/10/12 11:50 Matrix: Water Date Received:

Sample ID: 110494GSB-23 (10-15') 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 1 was 04/12/12 was 5.0 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 Iodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was Toluene <1.0 ug/L 1 04/12/12 was 04/12/12 was 1.0



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

04/10/12 11:50 Trace ID: T12D101-03 Date Collected: Matrix: Water Sample ID: 110494GSB-23 (10-15') Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/12/12 04/12/12 trans-1,3-Dichloropropene <1.0 ug/L 1.0 was was <1.0 ug/L 04/12/12 04/12/12 1,1,2-Trichloroethane 1.0 was was Tetrachloroethene <1.0 ug/L 1.0 04/12/12 was 04/12/12 was 2-Hexanone <50 ug/L 04/12/12 04/12/12 50 1 was was Dibromochloromethane <5.0 ug/L 04/12/12 04/12/12 5.0 was was 1,2-Dibromoethane (EDB) <1.0 ug/L 1 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Chlorobenzene <1.0 ug/L 1 was was 1.0 04/12/12 04/12/12 1,1,1,2-Tetrachloroethane <1.0 ug/L 1.0 1 was was 04/12/12 04/12/12 Ethylbenzene <1.0 ug/L 1 was was 1.0 04/12/12 04/12/12 m,p-Xylene <2.0 ug/L 2.0 1 was was Ν 04/12/12 04/12/12 o-Xylene <1.0 ug/L 1.0 1 was was Ν 04/12/12 <3.0 ug/L 04/12/12 Xylenes, total 3.0 1 was was Ν 04/12/12 04/12/12 <1.0 ug/L Styrene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L Bromoform 1.0 1 was was 04/12/12 04/12/12 <5.0 ug/L Isopropylbenzene 5.0 1 was was 04/12/12 1,1,2,2-Tetrachloroethane <1.0 ug/L 1 04/12/12 1.0 was was 04/12/12 04/12/12 1,2,3-Trichloropropane <1.0 ug/L was 1.0 1 was 04/12/12 trans-1,4-Dichloro-2-butene 04/12/12 <1.0 ug/L 1.0 1 was was Bromobenzene <1.0 ug/L 04/12/12 04/12/12 1 was was 1.0 04/12/12 04/12/12 n-Propylbenzene <1.0 ug/L 1.0 1 was was 1,3,5-Trimethylbenzene <1.0 ug/L 04/12/12 04/12/12 1 was was 1.0 <1.0 ug/L 04/12/12 04/12/12 t-Butyl Benzene was was 1.0 1,2,4-Trimethylbenzene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 sec-Butylbenzene <1.0 ug/L 1 was was 1.0 p-Isopropyltoluene <5.0 ug/L 04/12/12 was 04/12/12 was 5.0 04/12/12 04/12/12 1,3-Dichlorobenzene <1.0 ug/L was was 1.0 1,4-Dichlorobenzene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 n-Butylbenzene <1.0 ug/L was was 1.0 <1.0 ug/L 04/12/12 04/12/12 1,2,3-Trimethylbenzene 1.0 was was Ν <1.0 ug/L 04/12/12 04/12/12 1,2-Dichlorobenzene 1.0 was was 1,2-Dibromo-3-chloropropane <1.0 ug/L 04/12/12 04/12/12 1.0 was was Hexachloroethane <5.0 ug/L 1 04/12/12 was 04/12/12 Ν 5.0 was 1,2,4-Trichlorobenzene <5.0 ug/L 1 04/12/12 04/12/12 5.0 was was Naphthalene <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 1,2,3-Trichlorobenzene <5.0 ug/L 04/12/12 was 04/12/12 was 5.0 <5.0 ug/L 04/12/12 04/12/12 2-Methylnaphthalene 1 was was Ν 5.0 Surrogates: 1,2-Dichloroethane-d4 121 % 68-133 04/12/12 was 04/12/12 was

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Toluene-d8



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-03 110494GSB-23 (10-15')			Collected: Received:	04/10/12 11: 04/10/12 16:		Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE (	ORGANIC COMPOUNDS BY	GC-MS								
4-Bromo	ofluorobenzene	75 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	nlorobenzene-d4	88 %	72-127	1	04/12/12	was	04/12/12	was		
SEMI-VOLA	ATILE ORGANIC COMPOUNI	DS BY GC-MS								
	<u>thod: EPA 8270C</u> T028568									
Naphthale		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
2-Methyln	aphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Phenanthi	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Anthracen	ne	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluoranthe	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Chrysene		<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (b)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Indeno (1,	,2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Dibenz (a.	,h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Benzo (g,l	h,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Surrogate	es:									
Nitrober	nzene-d5	73 %	36-103	1	04/11/12	kb	04/13/12	avl		
2-Fluoro	bbiphenyl	65 %	36-119	1	04/11/12	kb	04/13/12	avl		
Terpher	nyl-d14	61 %	37-109	1	04/11/12	kb	04/13/12	avl		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-03 110494GSB-23 (10-15')			Collected: Received:	04/10/12 11:5 04/10/12 16:3		Matrix:	Water		
PARAMETER	es	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, D	ISSOLVED									
	<u>hod: EPA 6020</u> T028659									
Arsenic		<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Barium		<0.10 mg/L	0.10	1	04/16/12	jd	04/17/12	jd		
Cadmium		<0.0010 mg/L	0.0010	1	04/16/12	jd	04/17/12	jd		
Chromium		<0.010 mg/L	0.010	1	04/16/12	jd	04/17/12	jd		
Copper		0.0079 mg/L	0.0040	1	04/16/12	jd	04/17/12	jd		
Lead		<0.0030 mg/L	0.0030	1	04/16/12	jd	04/17/12	jd		
Selenium		<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Silver		<0.00020 mg/L	0.00020	1	04/16/12	jd	04/17/12	jd		
Zinc		2.4 mg/L	0.15	1	04/16/12	jd	04/17/12	jd		
	thod: EPA 7470A T028596									
Mercury		<0.00020 mg/L	0.00020	1	04/12/12	ns	04/13/12	jd		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-04 Date Collected: 04/10/12 12:25 Matrix: Water

Sample ID: 110494GSB-24 (10-15') Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was

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<1.0 ug/L

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1.0

1

04/12/12

was

04/12/12

was

Toluene



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

race ID: T12D101-04 ample ID: 110494GSB-24 (10-15')			Collected: Received:	04/10/12 12:2 04/10/12 16:3		Matrix:	Water		
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANIC COMPOUNDS BY	Y GC-MS								
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
2-Hexanone	<50 ug/L	50	1	04/12/12	was	04/12/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/12/12	was	04/12/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/12/12	was	04/12/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	- •	
Naphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	••	
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
Surrogates:	-5.0 ug/L	ა.0	·	V 11 12/12	***	V 11 12/12	***45	14	
1,2-Dichloroethane-d4	125 %	68-133	1	04/12/12	was	04/12/12	was		
Toluene-d8	115 %	75-120	1	04/12/12	was	04/12/12	was		

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### **ANALYTICAL RESULTS**

T12D101 Trace Project ID:

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-04 110494GSB-24 (10-15')			Collected: Received:	04/10/12 12:2 04/10/12 16:3		Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
VOLATILE (	ORGANIC COMPOUNDS BY	GC-MS								
4-Bromo	ofluorobenzene	75 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	ılorobenzene-d4	90 %	72-127	1	04/12/12	was	04/12/12	was		
SEMI-VOLA	TILE ORGANIC COMPOUNI	DS BY GC-MS								
	<u>thod: EPA 8270C</u> T028568									
Naphthale	ene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
2-Methyln	aphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Phenanthi	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Anthracen	ne	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluoranthe	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Chrysene		<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (b)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Indeno (1,	2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Dibenz (a,	,h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Benzo (g,l	h,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Surrogate	es:									
Nitrober	nzene-d5	78 %	36-103	1	04/11/12	kb	04/13/12	avl		
2-Fluoro	bbiphenyl	70 %	36-119	1	04/11/12	kb	04/13/12	avl		
Terpher	nyl-d14	66 %	37-109	1	04/11/12	kb	04/13/12	avl		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-04 Sample ID: 110494GSB-24 (10-15')			Collected: Received:	04/10/12 12:2 04/10/12 16:3		Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED  Analysis Method: EPA 6020  Batch: T028659									
Arsenic	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Barium	<0.10 mg/L	0.10	1	04/16/12	jd	04/17/12	jd		
Cadmium	<0.0010 mg/L	0.0010	1	04/16/12	jd	04/17/12	jd		
Chromium	<0.010 mg/L	0.010	1	04/16/12	jd	04/17/12	jd		
Copper	<0.0040 mg/L	0.0040	1	04/16/12	jd	04/17/12	jd		
Lead	<0.0030 mg/L	0.0030	1	04/16/12	jd	04/17/12	jd		
Selenium	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Silver	0.00021 mg/L	0.00020	1	04/16/12	jd	04/17/12	jd		
Zinc	<0.15 mg/L	0.15	1	04/16/12	jd	04/17/12	jd		
<u>Analysis Method: EPA 7470A</u> Batch: T028596									
Mercury	<0.00020 mg/L	0.00020	1	04/12/12	ns	04/13/12	jd		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-05 Date Collected: 04/10/12 12:55 Matrix: Water Sample ID: 110494GSB-25 (10-15') Date Received: 04/10/12 16:37

**PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was Toluene <1.0 ug/L 1 04/12/12 was 04/12/12 was 1.0



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-05 110494GSB-25 (10-15')			Collected: Received:	04/10/12 12:5 04/10/12 16:3		Matrix:	Water		
PARAMETERS	6	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
OLATILE O	RGANIC COMPOUNDS BY	GC-MS								
trans-1,3-Di	ichloropropene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,2-Trichlo	oroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Tetrachloro	ethene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
2-Hexanone	е	<50 ug/L	50	1	04/12/12	was	04/12/12	was		
Dibromochle	oromethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromo	oethane (EDB)	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Chlorobenz	ene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,1,2-Tetr	rachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Ethylbenzer	ne	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
m,p-Xylene		<2.0 ug/L	2.0	1	04/12/12	was	04/12/12	was	N	
o-Xylene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
Xylenes, tot	tal	<3.0 ug/L	3.0	1	04/12/12	was	04/12/12	was	N	
Styrene		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromoform		<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Isopropylbe	enzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,1,2,2-Tetr	rachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trichlo	oropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
trans-1,4-Di	ichloro-2-butene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromobenz	ene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Propylber	nzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,3,5-Trime	thylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
t-Butyl Benz	zene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,4-Trime	thylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
sec-Butylbe	enzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
p-Isopropylt	toluene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,3-Dichloro	obenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,4-Dichloro	obenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Butylbenz	zene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trime	thylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
1,2-Dichloro	obenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromo	o-3-chloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Hexachloro	ethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,4-Trichle	orobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
Naphthalen	e	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,3-Trichlo		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
2-Methylnar		<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
Surrogates		Ü	5.0							
•	oroethane-d4	125 %	68-133	1	04/12/12	was	04/12/12	was		
Toluene-d		100 %	75-120	1	04/12/12	was	04/12/12	was		

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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-05 110494GSB-25 (10-15')			Collected: Received:	04/10/12 12: 04/10/12 16:		Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE	ORGANIC COMPOUNDS BY	GC-MS								
4-Bromo	ofluorobenzene	74 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	nlorobenzene-d4	87 %	72-127	1	04/12/12	was	04/12/12	was		
SEMI-VOLA	ATILE ORGANIC COMPOUN	DS BY GC-MS								
	<u>thod: EPA 8270C</u> T028568									
Naphthale	ene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
2-Methyln	aphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphti	hylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Phenanth	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Anthracer	ne	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluoranthe	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Chrysene		<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (b)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Indeno (1,	,2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Dibenz (a	,h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Benzo (g,	h,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Surrogate	es:									
Nitrober	nzene-d5	74 %	36-103	1	04/11/12	kb	04/13/12	avl		
2-Fluoro	bbiphenyl	65 %	36-119	1	04/11/12	kb	04/13/12	avl		
Terpher	nyl-d14	67 %	37-109	1	04/11/12	kb	04/13/12	avl		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-05 Sample ID: 110494GSB-25 (10-15')			Collected: Received:	04/10/12 12:5 04/10/12 16:3		Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED  Analysis Method: EPA 6020  Batch: T028659									
Arsenic	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Barium	<0.10 mg/L	0.10	1	04/16/12	jd	04/17/12	jd		
Cadmium	<0.0010 mg/L	0.0010	1	04/16/12	jd	04/17/12	jd		
Chromium	<0.010 mg/L	0.010	1	04/16/12	jd	04/17/12	jd		
Copper	<0.0040 mg/L	0.0040	1	04/16/12	jd	04/17/12	jd		
Lead	<0.0030 mg/L	0.0030	1	04/16/12	jd	04/17/12	jd		
Selenium	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Silver	<0.00020 mg/L	0.00020	1	04/16/12	jd	04/17/12	jd		
Zinc	<0.15 mg/L	0.15	1	04/16/12	jd	04/17/12	jd		
Analysis Method: EPA 7470A Batch: T028596									
Mercury	<0.00020 mg/L	0.00020	1	04/12/12	ns	04/13/12	jd		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

 Trace ID:
 T12D101-06
 Date Collected:
 04/10/12 13:40
 Matrix:
 Water

 Sample ID:
 110494GSB-26 (10-15')
 Date Received:
 04/10/12 16:37

#### **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was

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<1.0 ug/L

1.0

1

04/12/12

was

04/12/12

was

Toluene



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

04/10/12 13:40 Trace ID: T12D101-06 Date Collected: Matrix: Water Sample ID: 110494GSB-26 (10-15') Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** 04/12/12 04/12/12 trans-1,3-Dichloropropene <1.0 ug/L was was 1.0 <1.0 ug/L 04/12/12 04/12/12 1,1,2-Trichloroethane 1.0 was was Tetrachloroethene <1.0 ug/L 1.0 04/12/12 was 04/12/12 was 2-Hexanone <50 ug/L 04/12/12 04/12/12 50 1 was was Dibromochloromethane <5.0 ug/L 04/12/12 04/12/12 5.0 was was 1,2-Dibromoethane (EDB) <1.0 ug/L 1 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Chlorobenzene <1.0 ug/L 1 was was 1.0 04/12/12 04/12/12 1,1,1,2-Tetrachloroethane <1.0 ug/L 1.0 1 was was 04/12/12 04/12/12 Ethylbenzene <1.0 ug/L 1 was was 1.0 04/12/12 04/12/12 m,p-Xylene <2.0 ug/L 2.0 1 was was Ν 04/12/12 04/12/12 o-Xylene <1.0 ug/L 1 was was Ν 1.0 04/12/12 <3.0 ug/L 04/12/12 Xylenes, total 3.0 1 was was Ν 04/12/12 04/12/12 <1.0 ug/L Styrene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L Bromoform 1.0 1 was was 04/12/12 04/12/12 <5.0 ug/L Isopropylbenzene 5.0 1 was was 04/12/12 1,1,2,2-Tetrachloroethane <1.0 ug/L 1 04/12/12 1.0 was was 04/12/12 04/12/12 1,2,3-Trichloropropane <1.0 ug/L was 1.0 1 was 04/12/12 trans-1,4-Dichloro-2-butene 04/12/12 <1.0 ug/L 1.0 1 was was Bromobenzene <1.0 ug/L 04/12/12 04/12/12 1 was was 1.0 04/12/12 04/12/12 n-Propylbenzene <1.0 ug/L 1.0 1 was was 1,3,5-Trimethylbenzene <1.0 ug/L 04/12/12 04/12/12 1 was was 1.0 <1.0 ug/L 04/12/12 04/12/12 t-Butyl Benzene was was 1.0 1,2,4-Trimethylbenzene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 sec-Butylbenzene <1.0 ug/L 1 was was 1.0 p-Isopropyltoluene <5.0 ug/L 04/12/12 was 04/12/12 was 5.0 04/12/12 04/12/12 1,3-Dichlorobenzene <1.0 ug/L was was 1.0 1,4-Dichlorobenzene <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 n-Butylbenzene <1.0 ug/L was was 1.0 <1.0 ug/L 04/12/12 04/12/12 1,2,3-Trimethylbenzene 1.0 was was Ν <1.0 ug/L 04/12/12 04/12/12 1,2-Dichlorobenzene 1.0 was was 1,2-Dibromo-3-chloropropane <1.0 ug/L 04/12/12 04/12/12 1.0 was was Hexachloroethane <5.0 ug/L 1 04/12/12 was 04/12/12 Ν 5.0 was 1,2,4-Trichlorobenzene <5.0 ug/L 1 04/12/12 04/12/12 5.0 was was Naphthalene <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 1,2,3-Trichlorobenzene <5.0 ug/L 04/12/12 was 04/12/12 was 5.0 <5.0 ug/L 04/12/12 04/12/12 2-Methylnaphthalene 1 was was Ν 5.0 Surrogates: 1,2-Dichloroethane-d4 123 % 68-133 04/12/12 was 04/12/12 was 04/12/12

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98 %

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75-120

was

04/12/12

was

Toluene-d8



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# **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-06 110494GSB-26 (10-15')			Collected: Received:	04/10/12 13:4 04/10/12 16:3		Matrix:	Water		
PARAMETE	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
VOLATILE	ORGANIC COMPOUNDS BY	GC-MS								
4-Brome	ofluorobenzene	74 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	nlorobenzene-d4	88 %	72-127	1	04/12/12	was	04/12/12	was		
	ATILE ORGANIC COMPOUNI	OS BY GC-MS								
	<u>ethod: EPA 8270C</u> T028568									
Naphthale	ene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
2-Methyln	naphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenapht	hylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenapht	hene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Phenanth	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Anthracer	ne	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluoranth	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Chrysene		<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (b)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Indeno (1	,2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Dibenz (a	,h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Benzo (g,	h,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Surrogate	es:									
Nitrobei	nzene-d5	90 %	36-103	1	04/11/12	kb	04/13/12	avl		
2-Fluoro	obiphenyl	80 %	36-119	1	04/11/12	kb	04/13/12	avl		
	nyl-d14	83 %	37-109	1	04/11/12	kb	04/13/12	avl		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-06 Sample ID: 110494GSB-26 (10-15')			Collected: Received:	04/10/12 13:4 04/10/12 16:3		Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED  Analysis Method: EPA 6020									
Batch: T028659	<0.0050 mg/l		4	04/16/12	:4	04/17/12	id		
Arsenic	<0.0050 mg/L	0.0050	1		jd : -		jd		
Barium	<0.10 mg/L	0.10	1	04/16/12	jd	04/17/12	jd		
Cadmium	<0.0010 mg/L	0.0010	1	04/16/12	jd	04/17/12	jd		
Chromium	<0.010 mg/L	0.010	1	04/16/12	jd	04/17/12	jd		
Copper	<0.0040 mg/L	0.0040	1	04/16/12	jd	04/17/12	jd		
Lead	<0.0030 mg/L	0.0030	1	04/16/12	jd	04/17/12	jd		
Selenium	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Silver	<0.00020 mg/L	0.00020	1	04/16/12	jd	04/17/12	jd		
Zinc	<0.15 mg/L	0.15	1	04/16/12	jd	04/17/12	jd		
Analysis Method: EPA 7470A Batch: T028596									
Mercury	<0.00020 mg/L	0.00020	1	04/12/12	ns	04/13/12	jd		



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#### ANALYTICAL RESULTS

Trace Project ID: T12D101

Toluene

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-07 Date Collected: 04/10/12 14:10 Matrix: Water Sample ID: 110494GSB-2 (10-15') Date Received: 04/10/12 16:37

**PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 1 was 04/12/12 was 5.0 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 Iodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0 Cyclohexane <5.0 ug/L 04/12/12 was 04/12/12 was Ν 5.0 Trichloroethene <1.0 ug/L 1.0 04/12/12 was 04/12/12 was 1,2-Dichloropropane <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 <5.0 ug/L 04/12/12 04/12/12 Dibromomethane 5.0 was was Bromodichloromethane <1.0 ug/L 1.0 1 04/12/12 was 04/12/12 was cis-1,3-Dichloropropene <1.0 ug/L 1 04/12/12 04/12/12 1.0 was was 4-Methyl-2-pentanone <50 ug/L 50 1 04/12/12 was 04/12/12 was

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<1.0 ug/L

1

04/12/12

was

04/12/12

was

1.0



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## **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

race ID: T12D101-07 ample ID: 110494GSB-2 (10-15')			Collected: Received:	04/10/12 14: <sup>-</sup> 04/10/12 16:3		Matrix:	Water		
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
OLATILE ORGANIC COMPOUNDS B									
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
2-Hexanone	<50 ug/L	50	1	04/12/12	was	04/12/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/12/12	was	04/12/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/12/12	was	04/12/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	-	
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
Surrogates:	0 %9/=	5.0	·	<b></b>		<b></b>	20	••	
1,2-Dichloroethane-d4	126 %	68-133	1	04/12/12	was	04/12/12	was		
Toluene-d8	99 %	75-120	1	04/12/12	was	04/12/12	was		

## **CERTIFICATE OF ANALYSIS**

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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-07 110494GSB-2 (10-15')			Collected: Received:	04/10/12 14: 04/10/12 16:		Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCI
VOLATILE (	ORGANIC COMPOUNDS BY	GC-MS								
4-Bromo	ofluorobenzene	75 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	nlorobenzene-d4	87 %	72-127	1	04/12/12	was	04/12/12	was		
	ATILE ORGANIC COMPOUN thod: EPA 8270C	DS BY GC-MS								
	T028568									
Naphthale	ene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
2-Methyln	aphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Acenaphtl	hene	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Phenanth	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Anthracer	ne	<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Fluoranthe	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Chrysene		<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (b)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Benzo (a)	pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Indeno (1,	,2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Dibenz (a	,h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/13/12	avl		
Benzo (g,	h,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/13/12	avl		
Surrogate										
Nitrober	nzene-d5	61 %	36-103	1	04/11/12	kb	04/13/12	avl		
2-Fluoro	bbiphenyl	52 %	36-119	1	04/11/12	kb	04/13/12	avl		
Terpher	nyl-d14	56 %	37-109	1	04/11/12	kb	04/13/12	avl		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-07 Sample ID: 110494GSB-2 (10-15')			Collected: Received:	04/10/12 14:1 04/10/12 16:3		Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED  Analysis Method: EPA 6020									
Batch: T028659									
Arsenic	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Barium	<0.10 mg/L	0.10	1	04/16/12	jd	04/17/12	jd		
Cadmium	<0.0010 mg/L	0.0010	1	04/16/12	jd	04/17/12	jd		
Chromium	<0.010 mg/L	0.010	1	04/16/12	jd	04/17/12	jd		
Copper	<0.0040 mg/L	0.0040	1	04/16/12	jd	04/17/12	jd		
Lead	<0.0030 mg/L	0.0030	1	04/16/12	jd	04/17/12	jd		
Selenium	<0.0050 mg/L	0.0050	1	04/16/12	jd	04/17/12	jd		
Silver	<0.00020 mg/L	0.00020	1	04/16/12	jd	04/17/12	jd		
Zinc	<0.15 mg/L	0.15	1	04/16/12	jd	04/17/12	jd		
Analysis Method: EPA 7470A Batch: T028596									
Mercury	<0.00020 mg/L	0.00020	1	04/12/12	ns	04/13/12	jd		



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-08 Date Collected: 04/10/12 14:40 Matrix: Water Sample ID: 110494EB-1GW Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was cis-1,2-Dichloroethene 04/12/12 04/12/12 <1.0 ug/L 1.0 1 was was <5.0 ug/L 04/12/12 t-Butyl Ethyl Ether 04/12/12 Ν 1 was 5.0 was Bromochloromethane <1.0 ug/L 04/12/12 04/12/12 was 1.0 1 was Tetrahydrofuran <90 ug/L 04/12/12 04/12/12 Ν 1 was was 90 Chloroform <1.0 ug/L 04/12/12 04/12/12 was was 1.0 1 <1.0 ug/L 1.1.1-Trichloroethane 04/12/12 04/12/12 was was 1.0 Carbon tetrachloride <1.0 ug/L 04/12/12 was 04/12/12 was 1.0 04/12/12 04/12/12 Benzene <1.0 ug/L was was 1.0 t-Amyl Methyl Ether <5.0 ug/L 1 04/12/12 was 04/12/12 was Ν 5.0 04/12/12 04/12/12 1,2-Dichloroethane <1.0 ug/L was was 1.0

#### **CERTIFICATE OF ANALYSIS**

<5.0 ug/L

<1.0 ug/L

<1.0 ug/L

<5.0 ug/L

<1.0 ug/L

<1.0 ug/L

<50 ug/L

<1.0 ug/L

5.0

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Cyclohexane

Trichloroethene

1,2-Dichloropropane

Bromodichloromethane

cis-1,3-Dichloropropene

4-Methyl-2-pentanone

Toluene

Dibromomethane



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: T12D101-08 Sample ID: 110494EB-1GW			Collected: Received:	04/10/12 14:4 04/10/12 16:3		Matrix:	Water		
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MC
OLATILE ORGANIC COMPOUN									
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
2-Hexanone	<50 ug/L	50	1	04/12/12	was	04/12/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/12/12	was	04/12/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/12/12	was	04/12/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
Surrogates:	Č	5.0							
1,2-Dichloroethane-d4	129 %	68-133	1	04/12/12	was	04/12/12	was		
Toluene-d8	98 %	75-120	1	04/12/12	was	04/12/12	was		



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:				Collected:	04/10/12 14: 04/10/12 16:		Matrix: Water			
PARAMETER	S	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE C	ORGANIC COMPOUND	OS BY GC-MS								
4-Bromo	fluorobenzene	73 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dichl	lorobenzene-d4	86 %	72-127	1	04/12/12	was	04/12/12	was		



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<1.0 ug/L

<5.0 ug/L

<1.0 ug/L

<90 ug/L

<1.0 ug/L

<1.0 ug/L

<1.0 ug/L

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<5.0 ug/L

<1.0 ug/L

<1.0 ug/L

<50 ug/L

<1.0 ug/L

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04/10/12 16:37

Matrix: Water

#### **ANALYTICAL RESULTS**

Date Collected:

Date Received:

Trace Project ID: T12D101

Trace ID:

Sample ID:

Client Project ID: VBCBRA / 110494C

T12D101-09

110494M-1GW

**PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY **ANALYZED** BY **NOTES** MCL **VOLATILE ORGANIC COMPOUNDS BY GC-MS** Analysis Method: EPA 8260B Batch: T028632 04/12/12 Dichlorodifluoromethane <5.0 ug/L 5.0 1 was 04/12/12 was 04/12/12 04/12/12 Chloromethane <5.0 ug/L 5.0 1 was was 04/12/12 04/12/12 Vinyl chloride <1.0 ug/L was was 1.0 04/12/12 04/12/12 Bromomethane <5.0 ug/L was was 5.0 04/12/12 04/12/12 Chloroethane <5.0 ug/L was was 5.0 Trichlorofluoromethane 04/12/12 04/12/12 <1.0 ug/L 1 was was 1.0 Diethyl ether <10 ug/L 04/12/12 04/12/12 10 was was Ν Tert-butyl alcohol <50 ug/L 04/12/12 04/12/12 Ν 50 1 was was 1,1-Dichloroethene <1.0 ug/L 04/12/12 04/12/12 1.0 was was Acetone <50 ug/L 1 04/12/12 was 04/12/12 was 50 04/12/12 04/12/12 lodomethane <1.0 ug/L 1 was was Ν 1.0 04/12/12 04/12/12 Carbon disulfide <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methyl-tert-butyl ether <5.0 ug/L 1 was was 5.0 04/12/12 04/12/12 Methylene chloride <5.0 ug/L 1 was was 5.0 04/12/12 Acrylonitrile <2.0 ug/L 2.0 1 04/12/12 was was <1.0 ug/L 04/12/12 04/12/12 trans-1,2-Dichloroethene 1.0 1 was was 04/12/12 04/12/12 <1.0 ug/L 1 1,1-Dichloroethane 1.0 was was <5.0 ug/L 04/12/12 04/12/12 Diisopropyl Ether 5.0 1 was was Ν 04/12/12 04/12/12 <25 ug/L 1 2-Butanone 25 was was

1.0

5.0

1.0

90

1.0

1.0

1.0

1.0

5.0

1.0

5.0

1.0

1.0

5.0

1.0

1.0

50

1.0

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cis-1,2-Dichloroethene

t-Butyl Ethyl Ether

Tetrahydrofuran

Chloroform

Benzene

Bromochloromethane

1.1.1-Trichloroethane

Carbon tetrachloride

t-Amyl Methyl Ether

1,2-Dichloroethane

1,2-Dichloropropane

Bromodichloromethane

cis-1,3-Dichloropropene

4-Methyl-2-pentanone

Toluene

Dibromomethane

Cyclohexane

Trichloroethene



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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

race ID: T12D101-09 ample ID: 110494M-1GW			Collected: Received:	04/10/12 04/10/12 16:3	7	Matrix:	Water		
ARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	МС
OLATILE ORGANIC COMPOUNDS									
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Tetrachloroethene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
2-Hexanone	<50 ug/L	50	1	04/12/12	was	04/12/12	was		
Dibromochloromethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromoethane (EDB)	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Chlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,1,1,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Ethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
m,p-Xylene	<2.0 ug/L	2.0	1	04/12/12	was	04/12/12	was	N	
o-Xylene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
Xylenes, total	<3.0 ug/L	3.0	1	04/12/12	was	04/12/12	was	N	
Styrene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromoform	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Isopropylbenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trichloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
trans-1,4-Dichloro-2-butene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Bromobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Propylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,3,5-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
t-Butyl Benzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,4-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
sec-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
p-Isopropyltoluene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
n-Butylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2,3-Trimethylbenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was	N	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
1,2-Dibromo-3-chloropropane	<1.0 ug/L	1.0	1	04/12/12	was	04/12/12	was		
Hexachloroethane	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,4-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
Naphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
1,2,3-Trichlorobenzene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was		
2-Methylnaphthalene	<5.0 ug/L	5.0	1	04/12/12	was	04/12/12	was	N	
Surrogates:	<del>.y</del> -	5.0	•					÷ •	
1,2-Dichloroethane-d4	129 %	68-133	1	04/12/12	was	04/12/12	was		
Toluene-d8	99 %	75-120	1	04/12/12	was	04/12/12	was		

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### **ANALYTICAL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

Trace ID: Sample ID:	T12D101-09 110494M-1GW			Collected: Received:	04/10/12 04/10/12 16:3	37	Matrix:	Water		
PARAMETER	RS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE (	ORGANIC COMPOUNDS	BY GC-MS								
4-Bromo	ofluorobenzene	72 %	69-119	1	04/12/12	was	04/12/12	was		
1,2-Dich	llorobenzene-d4	85 %	72-127	1	04/12/12	was	04/12/12	was		
SEMI-VOLA	TILE ORGANIC COMPO	UNDS BY GC-MS								
	thod: EPA 8270C T028568									
Naphthale	ene	<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
2-Methyln	aphthalene	<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
Acenaphth	nylene	<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
Acenaphth	nene	<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
Fluorene		<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
Phenanthr	rene	<2.0 ug/L	2.0	1	04/11/12	kb	04/14/12	avl		
Anthracen	e	<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
Fluoranthe	ene	<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Pyrene		<5.0 ug/L	5.0	1	04/11/12	kb	04/14/12	avl		
Benzo (a)	anthracene	<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Chrysene		<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Benzo (b)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Benzo (k)	fluoranthene	<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Benzo (a)	pyrene	<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Indeno (1,	2,3-cd) pyrene	<2.0 ug/L	2.0	1	04/11/12	kb	04/14/12	avl		
Dibenz (a,	h) anthracene	<2.0 ug/L	2.0	1	04/11/12	kb	04/14/12	avl		
Benzo (g,l	n,i) perylene	<1.0 ug/L	1.0	1	04/11/12	kb	04/14/12	avl		
Surrogate	s:									
Nitrober	nzene-d5	92 %	36-103	1	04/11/12	kb	04/14/12	avl		
2-Fluoro	biphenyl	80 %	36-119	1	04/11/12	kb	04/14/12	avl		
Terphen	ıyl-d14	86 %	37-109	1	04/11/12	kb	04/14/12	avl		



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<0.010 mg/L

<0.0040 mg/L

<0.0030 mg/L

<0.0050 mg/L

<0.00020 mg/L

<0.15 mg/L

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#### **ANALYTICAL RESULTS**

Date Collected:

Trace Project ID: T12D101

Trace ID:

Client Project ID: VBCBRA / 110494C

T12D101-09

Sample ID: 110494M-1GW Date Received: 04/10/12 16:37 **PARAMETERS RESULTS UNITS** RDL DILUTION **PREPARED** BY ANALYZED BY **NOTES** MCL METALS, DISSOLVED Analysis Method: EPA 6020 Batch: T028659 <0.0050 mg/L 04/16/12 jd 04/17/12 jd Arsenic 1 0.0050 Barium <0.10 mg/L 1 04/16/12 jd 04/17/12 jd 0.10 <0.0010 mg/L 04/16/12 04/17/12 Cadmium jd jd 1 0.0010

0.010

0.0040

0.0030

0.0050

0.00020

0.15

# Analysis Method: EPA 7470A

Batch: T028596

Mercury

Chromium

Copper

Selenium

Lead

Silver

Zinc

<0.00020 mg/L

0.00020

04/12/12

04/10/12

04/16/12

04/16/12

04/16/12

04/16/12

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1

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Matrix: Water



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# **QUALITY CONTROL RESULTS**

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

QC Batch: T028659 QC Batch Method:

Analysis Description: Chromium, Dissolved

Analysis Method: EPA 6020

#### METHOD BLANK: T028659-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.00020	0.00020	
Arsenic	mg/L	<0.0050	0.0050	
Barium	mg/L	<0.10	0.10	
Cadmium	mg/L	<0.0010	0.0010	
Chromium	mg/L	<0.010	0.010	
Copper	mg/L	<0.0040	0.0040	
Lead	mg/L	<0.0030	0.0030	
Selenium	mg/L	<0.0050	0.0050	
Zinc	mg/L	<0.15	0.15	

### LABORATORY CONTROL SAMPLE: T028659-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.250	0.258	103	80-120	
Arsenic	mg/L	0.250	0.253	101	80-120	
Barium	mg/L	0.250	0.253	101	80-120	
Cadmium	mg/L	0.250	0.255	102	80-120	
Chromium	mg/L	0.250	0.250	100	80-120	
Copper	mg/L	0.250	0.254	102	80-120	
Lead	mg/L	0.250	0.257	103	80-120	
Selenium	mg/L	0.250	0.252	101	80-120	
Zinc	mg/L	0.250	0.252	101	80-120	

#### Original: T12D101-05 MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028659-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/L	0.0000705	0.250	0.244	0.245	97	98	75-125	0.5	20	
Arsenic	mg/L	0	0.250	0.259	0.260	104	104	75-125	0.5	20	
Barium	mg/L	0.0190	0.250	0.275	0.271	102	101	75-125	2	20	
Cadmium	mg/L	0	0.250	0.257	0.257	103	103	75-125	0.2	20	
Chromium	mg/L	0	0.250	0.254	0.260	101	104	75-125	2	20	
Copper	mg/L	0.00106	0.250	0.251	0.257	100	102	75-125	2	20	
Lead	mg/L	0	0.250	0.256	0.252	102	101	75-125	1	20	



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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028659-MSD1

Original	: T1	2D1	01	-05
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Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Selenium	mg/L	0	0.250	0.260	0.262	104	105	75-125	0.8	20	
Zinc	mg/L	0	0.250	0.264	0.255	105	102	75-125	3	20	

Trace Project ID: T12D101

Client Project ID: VBCBRA / 110494C

QC Batch: T028596 Analysis Description: Mercury, Dissolved, EPA 7470

QC Batch Method: EPA 7470A Prep Analysis Method: EPA 7470A

#### METHOD BLANK: T028596-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

### LABORATORY CONTROL SAMPLE: T028596-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00200	100	77-122	

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028596-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00204	0.00206	102	103	76-123	1	20	

Trace Project ID: T12D101 Client Project ID: VBCBRA / 110494C

Original: T12D101-05

QC Batch: T028568 Analysis Description: PNAs QC Batch Method: EPA 3510C Separatory Funnel Analysis Method: EPA 8270C

Liquid-Liquid Extr.

### METHOD BLANK: T028568-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes			
Naphthalene	ug/L	<5.0	5.0				
2-Methylnaphthalene	ug/L	<5.0	5.0				
Acenaphthylene	ug/L	<5.0	5.0				
Acenaphthene	ug/L	<5.0	5.0				
Fluorene	ug/L	<5.0	5.0				
Phenanthrene	ug/L	<2.0	2.0				
Anthracene	ug/L	<5.0	5.0				
Fluoranthene	ug/L	<1.0	1.0				
Pyrene	ug/L	<5.0	5.0				
Benzo (a) anthracene	ug/L	<1.0	1.0				
Chrysene	ug/L	<1.0	1.0				
Benzo (b) fluoranthene	ug/L	<1.0	1.0				



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### METHOD BLANK: T028568-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Benzo (k) fluoranthene	ug/L	<1.0	1.0	
Benzo (a) pyrene	ug/L	<1.0	1.0	
Indeno (1,2,3-cd) pyrene	ug/L	<2.0	2.0	
Dibenz (a,h) anthracene	ug/L	<2.0	2.0	
Benzo (g,h,i) perylene	ug/L	<1.0	1.0	
Nitrobenzene-d5 (S)	%	70	36-103	
2-Fluorobiphenyl (S)	%	61	36-119	
Terphenyl-d14 (S)	%	87	37-109	

## LABORATORY CONTROL SAMPLE: T028568-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Acenaphthene	ug/L	51.0	40.3	79	42-105	
Pyrene	ug/L	50.5	42.6	84	47-116	
Nitrobenzene-d5 (S)	%	100	82.4	82	36-103	
2-Fluorobiphenyl (S)	%	101	71.3	71	36-119	
Terphenyl-d14 (S)	%	105	92.1	88	37-109	

### TRIX SPIKE / MATRIX SPIKE DUPLICATE: T028568-MSD1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028568-MSD1				Original: <b>T12D101-05</b>							
Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Acenaphthene	ug/L	0	48.4	41.6	35.9	86	74	44-106	14	22	
Pyrene	ug/L	0	48.0	42.3	34.8	88	73	55-113	19	24	
Nitrobenzene-d5 (S)	%		95.0	78.7	68.0	83	72	36-103			
2-Fluorobiphenyl (S)	%		95.9	70.8	64.0	74	67	36-119			
Terphenyl-d14 (S)	%		99.7	82.0	70.4	82	71	37-109			

Trace Project ID: T12D101 Client Project ID: VBCBRA / 110494C

QC Batch: T028632 Analysis Description: Volatiles, Full MDEQ+ List

QC Batch Method: EPA 8260B Analysis Method: EPA 8260B

## METHOD BLANK: T028632-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dichlorodifluoromethane	ug/L	<5.0	5.0	
Chloromethane	ug/L	<5.0	5.0	
Vinyl chloride	ug/L	<1.0	1.0	
Bromomethane	ug/L	<5.0	5.0	
Chloroethane	ug/L	<5.0	5.0	
Trichlorofluoromethane	ug/L	<1.0	1.0	
Diethyl ether	ug/L	<10	10	
Tert-butyl alcohol	ug/L	<50	50	
1,1-Dichloroethene	ug/L	<1.0	1.0	

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Page 40 of 45 Report ID: T12D101 FINAL 04 18 12 1329



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### METHOD BLANK: T028632-BLK1

arameter	Units	Blank Result	Reporting Limit	Notes
cetone	ug/L	<50	50	
odomethane	ug/L	<1.0	1.0	
arbon disulfide	ug/L	<5.0	5.0	
lethyl-tert-butyl ether	ug/L	<5.0	5.0	
lethylene chloride	ug/L	<5.0	5.0	
crylonitrile	ug/L	<2.0	2.0	
ans-1,2-Dichloroethene	ug/L	<1.0	1.0	
,1-Dichloroethane	ug/L	<1.0	1.0	
iisopropyl Ether	ug/L	<5.0	5.0	
-Butanone	ug/L	<25	25	
is-1,2-Dichloroethene	ug/L	<1.0	1.0	
Butyl Ethyl Ether	ug/L	<5.0	5.0	
romochloromethane	ug/L	<1.0	1.0	
etrahydrofuran	ug/L	<90	90	
hloroform	ug/L	<1.0	1.0	
,1,1-Trichloroethane	ug/L	<1.0	1.0	
arbon tetrachloride	ug/L	<1.0	1.0	
enzene	ug/L	<1.0	1.0	
Amyl Methyl Ether	ug/L	<5.0	5.0	
2-Dichloroethane	ug/L	<1.0	1.0	
yclohexane	ug/L	<5.0	5.0	
richloroethene	ug/L	<1.0	1.0	
2-Dichloropropane	ug/L	<1.0	1.0	
ibromomethane	ug/L	<5.0	5.0	
romodichloromethane	ug/L	<1.0	1.0	
s-1,3-Dichloropropene	ug/L	<1.0	1.0	
-Methyl-2-pentanone	ug/L	<50	50	
oluene	ug/L	<1.0	1.0	
ans-1,3-Dichloropropene	ug/L	<1.0	1.0	
1,2-Trichloroethane	ug/L	<1.0	1.0	
etrachloroethene	ug/L	<1.0	1.0	
-Hexanone	ug/L	<50	50	
ibromochloromethane	ug/L	<5.0	5.0	
2-Dibromoethane (EDB)	ug/L	<1.0	1.0	
hlorobenzene	ug/L	<1.0	1.0	
1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	
thylbenzene	ug/L	<1.0	1.0	
,p-Xylene	ug/L	<2.0	2.0	
Xylene	ug/L	<1.0	1.0	
ylenes, total	ug/L	<3.0	3.0	
yrene	ug/L	<1.0	1.0	
romoform	ug/L	<1.0	1.0	
opropylbenzene	ug/L ug/L	<5.0	5.0	
1,2,2-Tetrachloroethane		<1.0	1.0	
2,3-Trichloropropane	ug/L	<1.0		
ans-1,4-Dichloro-2-butene	ug/L	<1.0	1.0	
	ug/L		1.0	
romobenzene	ug/L	<1.0	1.0	

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#### METHOD BLANK: T028632-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
1,3,5-Trimethylbenzene	ug/L	<1.0	1.0	
t-Butyl Benzene	ug/L	<1.0	1.0	
1,2,4-Trimethylbenzene	ug/L	<1.0	1.0	
sec-Butylbenzene	ug/L	<1.0	1.0	
p-Isopropyltoluene	ug/L	<5.0	5.0	
1,3-Dichlorobenzene	ug/L	<1.0	1.0	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	
n-Butylbenzene	ug/L	<1.0	1.0	
1,2,3-Trimethylbenzene	ug/L	<1.0	1.0	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	1.0	
Hexachloroethane	ug/L	<5.0	5.0	
1,2,4-Trichlorobenzene	ug/L	<5.0	5.0	
Naphthalene	ug/L	<5.0	5.0	
1,2,3-Trichlorobenzene	ug/L	<5.0	5.0	
2-Methylnaphthalene	ug/L	<5.0	5.0	
1,2-Dichloroethane-d4 (S)	%	112	68-133	
Toluene-d8 (S)	%	102	75-120	
4-Bromofluorobenzene (S)	%	80	69-119	
1,2-Dichlorobenzene-d4 (S)	%	92	72-127	

## LABORATORY CONTROL SAMPLE: T028632-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
1,1-Dichloroethene	ug/L	20.0	22.6	113	64-156	
Benzene	ug/L	20.0	19.4	97	80-120	
Trichloroethene	ug/L	20.0	22.3	112	69-133	
Toluene	ug/L	20.0	19.8	99	80-120	
Chlorobenzene	ug/L	20.0	22.0	110	80-120	
1,2-Dichloroethane-d4 (S)	%	25.0	28.3	113	68-133	
Toluene-d8 (S)	%	25.0	25.2	101	75-120	
4-Bromofluorobenzene (S)	%	40.0	31.3	78	69-119	
1,2-Dichlorobenzene-d4 (S)	%	40.0	38.3	96	72-127	

#### Original: T12D101-05 MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028632-MSD1

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
1,1-Dichloroethene	ug/L	0	20.0	25.3	24.5	126	123	60-146	3	15	
Benzene	ug/L	0	20.0	20.3	19.9	102	100	78-114	2	11	
Trichloroethene	ug/L	0	20.0	23.9	23.2	119	116	70-117	3	14	208
Toluene	ug/L	0	20.0	20.6	20.4	103	102	77-118	8.0	10	
Chlorobenzene	ug/L	0	20.0	22.3	22.6	111	113	75-116	1	12	
1,2-Dichloroethane-d4 (S)	%		25.0	31.2	29.9	125	120	68-133			
Toluene-d8 (S)	%		25.0	25.3	25.3	101	101	75-120			

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T028632-MSD1

Original.	T12D101-05

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
4-Bromofluorobenzene (S)	%		40.0	29.3	29.9	73	75	69-119			
1,2-Dichlorobenzene-d4 (S)	%		40.0	36.5	37.3	91	93	72-127			



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# SAMPLE LOG IN CHECKLIST

Date: 4-10-12	Client Name: <u>Fル山沢</u>	Olagic Tech	# of Coolers:	
Trace ID #: 7/2.10 / 0 /	Project Name:	<del></del>	Cooler #s:	
	Logged in by:	uld	_ Cooler #s:	
	Cooler Red	eipt		
	Trace courier			
Cooler/samples delivered by:	Hand delivered	Name of delivery pe	erson:	
	Commercial courier	UPS DHL	. FED EX	US Mail
Did cooler come with a bill of lading?	No	Not Ap	plicable	
	Yes	Way Bill or Track	ing #:	
COC Seals present and intact on cooler?	No Yes	Not Applicable		
Custody seals signed by Client?	No Client Yes	custody seal # (if applicable):		
	Coolant and Ter	mperature		
Type of Coolant Use	ed	Cooler Temperature	Correction Fact	or_0.4/°C
	Yes No	Date: <u>4/~/0~/2</u>	Time: <u>/6</u> . 3 7	<del></del>
Slurry w/ crushed, cubed, or chip ice?		Temperature Blank:		°C
Multiple bags of ice around samples?		Range of 3 samples:	3,4	°C
Ice Packs/ Blue Ice :		Melt Water:		°C
No Coolant Present:		ce still present upon receipt:	Yes	No
	Genera	I		
				es No N
	COC taped to inside of coole	er lid?		
All bottles arrived unb	oken with labels in good cond	ition?	[	
Each sam	ple point is in a sealed plastic			
	Labels filled out comple	[1072477777777777777777777777777777777777		
All bottle labels a	gree with Chain of Custody (C	OC)?		
Sumo	ent sample to run tests reque	sted? 		
	necked and samples at correctect preservative added to sam	nla a O		爿늗+
DRO/GRO samples received and ap			<u></u>	
	Air bubbles absent from V			
COC filled	d out properly and signed by c			
COC sign	ed in by TRACE sample custo	dian?		7
Was project mana	ger called and samples discus	sed?		
Contact:		Date:		
otes:				
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		Tì		**************************************



toll-free fax

phone

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May 04, 2012

Mr. David Stegink Envirologic Technologies, Inc. 2960 Interstate Parkway Kalamazoo, MI 49048

Phone: (269) 342-1100 Fax: (269) 342-4945

RE: Trace Project T12E064

Client Project VBCBRA / 110494C

Dear Mr. Stegink:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink Project Manager

**Enclosures** 





fax

phone 231.773.5998 toll-free 800.733.5998 231.773.6537

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# **SAMPLE SUMMARY**

Trace Project ID: T12E064

Client Project ID: VBCBRA / 110494C

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T12E064-01	110494GSB-23 (10-15')	Water	rw	04/10/12 11:50	04/10/12 16:37



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### AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

## **DEFINITIONS**

LCS Laboratory Control Sample

**LCSD** Laboratory Control Sample Duplicate

MS Matrix Spike

**MSD** Matrix Spike Duplicate **RPD** Relative Percent Difference

DUP Matrix Duplicate

RDL Reporting Detection Limit MCL Maximum Contamination Limit TIC Tentatively Identified Compound

<, ND or U Indicates the compound was analyzed for but not detected

Indicates a result that exceeds its associated MCL or Surrogate control limits

Ν Indicates that the compound has not been evaluated by NELAC

NA Indicates that the compound is not available.



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#### **ANALYTICAL RESULTS**

Trace Project ID: T12E064

Client Project ID: VBCBRA / 110494C

Trace ID: T12E064-01 Date Collected: 04/10/12 11:50 Matrix: Water

Sample ID: 110494GSB-23 (10-15') Date Received: 04/10/12 16:37

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

## METALS, DISSOLVED

#### Analysis Method: EPA 6010B

Batch: T028866

 Iron
 1.1 mg/L
 0.20
 1
 05/03/12
 jd
 05/03/12
 jd

 Manganese
 <0.050 mg/L</td>
 0.050
 1
 05/03/12
 jd
 05/03/12
 jd



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# **QUALITY CONTROL RESULTS**

Trace Project ID: T12E064

Client Project ID: VBCBRA / 110494C

QC Batch: T028866 QC Batch Method:

Analysis Description: Manganese, Dissolved

Analysis Method: EPA 6010B

#### METHOD BLANK: T028866-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/L	<0.20	0.20	
Manganese	mg/L	<0.050	0.050	

### LABORATORY CONTROL SAMPLE: T028866-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/L	10.0	9.74	97	80-120	
Manganese	mg/L	1.00	0.991	99	80-120	



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